

# **Audit**



# **Report**

OFFICE OF THE INSPECTOR GENERAL

**PROVIDING AIRCRAFT TO THE  
NAVAL AIR RESERVE FORCE**

Report No. 97-058

December 27, 1996

**Department of Defense**

### **Additional Copies**

To obtain additional copies of this audit report, contact the Secondary Reports Distribution Unit of the Analysis, Planning, and Technical Support Directorate at (703) 604-8937 (DSN 664-8937) or FAX (703) 604-8932.

### **Suggestions for Future Audits**

To suggest ideas for or to request future audits, contact the Planning and Coordination Branch of the Analysis, Planning, and Technical Support Directorate at (703) 604-8939 (DSN 664-8939) or FAX (703) 604-8932. Ideas and requests can also be mailed to:

OAIG-AUD (ATTN: APTS Audit Suggestions)  
Inspector General, Department of Defense  
400 Army Navy Drive (Room 801)  
Arlington, Virginia 22202-2884

### **Defense Hotline**

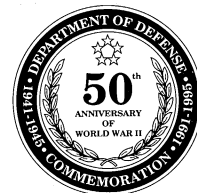
To report fraud, waste, or abuse, contact the Defense Hotline by calling (800) 424-9098; by sending an electronic message to [Hotline@DODIG.OSD.MIL](mailto:Hotline@DODIG.OSD.MIL); or by writing the Defense Hotline, The Pentagon, Washington, D.C. 20301-1900. The identity of each writer and caller is fully protected.

### **Acronyms**

BRAC	Base Realignment and Closure
CNARF	Commander, Naval Air Reserve Force
IG	Inspector General
NAF	Naval Air Facility
NAS	Naval Air Station
NAVAIR	Naval Air Systems Command
POE	Projected Operational Environment
ROC	Required Operational Capability



**INSPECTOR GENERAL**  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-2884



December 27, 1996

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (RESERVE  
AFFAIRS)  
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL  
MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on Providing Aircraft to the Naval Air Reserve Force  
(Report No. 97-058)

We are providing this final audit report for your review and comment. This report is the third in a series of audit reports on planning for providing aircraft to Reserve Components. We considered the consolidated Department of the Navy comments on the draft report in preparing this final report.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Based on management comments to Finding E., we revised the finding and recommendation to reflect that the Reserves are short 16 countermeasure sets. Also, the Department of the Navy did not provide completion dates for all recommendations. Therefore, we request that the Department of the Navy provide additional comments to Recommendations A.1., A.2., B., D.1., D.4., and E. by February 27, 1997.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. James L. Koloshey, Audit Program Director, at (703) 604-8961 (DSN 664-8961) or Mr. Thomas J. Winter, Audit Project Manager, at (703) 604-8978 (DSN 664-8978). See Appendix F for the report distribution. The audit team members are listed inside the back cover.

*David K. Steensma*

David K. Steensma  
Assistant Inspector General  
for Auditing

## Office of the Inspector General, DoD

**Report No. 97-058**  
(Project No. 4AG-0014.02)

**December 27, 1996**

### **Providing Aircraft to the Naval Air Reserve Force**

#### **Executive Summary**

**Introduction.** This report is the third in a series of audit reports on providing aircraft for the Reserve Components. This report addresses transferring P-3C, F-14, and F/A-18 aircraft from Active Naval Components and procuring C-130T aircraft by congressional direction for the Naval Air Reserve Force. The Reserves are a critical Component in the DoD Total Force Policy and will increase its participation from about 14 million to 20 million man-hours by 2001. The Naval Reserve Force represents about 20 percent of the personnel, but accounts for about 3 percent of the Service's overall budget.

**Audit Objectives.** The primary audit objective of this report was to evaluate the adequacy of Navy and Marine Corps planning for aircraft transfers and congressionally directed procurements. Specifically, we evaluated the adequacy of planning for training, personnel, manpower, support equipment, and spare parts to support the selected aircraft systems. We also evaluated the adequacy of the management control program as it applied to the audit objective. We did not address the Marine Corps Reserves in this report because our review of the KC-130T was limited to visiting one site, upon which we made no conclusions.

**Audit Results.** The Navy did not consider critical supportability factors during the planning and execution process. Specifically,

- o Part-time C-130T and P-3C Reservists spent about 20 percent of their time taking non-mission-essential courses even though they did not have time to become fully qualified for operational taskings (Finding A).

- o C-130T and P-3C squadrons we reviewed were understaffed by 27 (56 percent) and 39 (46 percent) qualified flight engineers, respectively (Finding B).

- o F/A-18 and F-14 squadrons may not have sufficient manpower for both missions of crisis response and fleet contributory support (adversary training) to participate as the enemy in combat simulations (Finding C).

- o Twenty-four P-3C aircraft had support equipment shortages valued at \$688,000, and 8 C-130T and 24 F/A-18 aircraft had spare part shortages valued at \$3.5 million, resulting in inoperable aircraft for extended periods. Based on the results of our audit, Navy personnel took significant action to correct C-130T support equipment shortages valued at \$5.6 million (Finding D).

- o Naval Air Reserve Force had not received 16 of the scheduled 84 countermeasures receiving sets, and the Active Fleets received more than those in the established requirements for the initial procurement. Consequently, readiness of Reserve Squadrons was adversely affected, limiting their ability to train and mobilize (Finding E).

We identified material Navy management control weaknesses over training, personnel, support equipment, and spare parts (Appendix A). Implementation of recommendations in this report will improve the Naval Air Reserve Force readiness and management controls. Potential benefits to be achieved are increased readiness and improved mobilization and training. Appendix E discusses the potential benefits.

**Summary of Recommendations.** We recommend that the six Navy organizations identified in the five findings:

- o evaluate the relative priority of training courses for C-130T and P-3C part-time Reservists;

- o reevaluate and fill P-3C and C-130T reserve flight engineer authorizations in accordance with Navy policy;

- o update F/A-18 and F-14 squadrons Required Operational Capability/Projected Operational Environment statements to reflect squadrons' dual missions;

- o modify C-130T flight hour requirements, distribute P-3C support equipment, submit F/A-18 Allowance Change Requests for additional spares requirements by increasing transportation time, and redistribute excess spares parts; and

- o reallocate and redistribute 16 countermeasures receiving sets to the Naval Reserve Air Force from Naval Air Systems Command if redetermined necessary by the Chief of Naval Operations.

**Management Comments.** The Navy agreed to modify training; request recruitment of full-time flight engineers; submit manpower requests for adversary training; take action to provide critical support equipment, repairable spare parts, and redistributions; and increase flight hour budgets. The Navy nonconcurred with the number of countermeasures sets reported as not being received by the Reserves. See Part I for a summary of management comments and Part III for the complete text.

**Audit Response.** We consider Navy comments responsive to 11 of 15 recommendations, but completion dates for most proposed actions were not provided. We request the Navy further consider waivers for General Navy Training for part-time reservists, and budgeting additional flight hours for C-130T aircraft in order to have adequate funds for spare parts. We revised the shortage of countermeasures receiving sets to 16. We request the Navy provide additional comments by February 27, 1997.

# Table of Contents

---

<b>Executive Summary</b>	<b>i</b>
<b>Part I - Audit Results</b>	
Audit Background	2
Audit Objectives	2
Finding A. Part-time Reservists Training	3
Finding B. Flight Engineer Manning	8
Finding C. Manpower for Adversary Training	13
Finding D. Support Equipment and Spare Parts	18
Finding E. Distribution of Countermeasures Receiving Sets	30
<b>Part II - Additional Information</b>	
Appendix A. Scope and Methodology	36
Scope	36
Methodology	36
Management Control Program	37
Appendix B. Prior Audits and Other Reviews	38
Appendix C. Aircraft Description	41
Appendix D. Non-Mission-Essential Courses	43
Appendix E. Summary of Potential Benefits Resulting From Audit	46
Appendix F. Report Distribution	47
<b>Part III - Management Comments</b>	
Department of the Navy Comments	50

## **Part I - Audit Results**

### Audit Background

**Reserve Components.** The Reserves are a critical component in the Total Force Policy of DoD. To efficiently establish the mix between active duty personnel and Reserves, a new concept of "compensating leverage" is used. The concept targets the use of Reserves to reduce the risks and control the costs resulting from smaller Active Forces. Under these policies and concepts, Reserves can engage in combat before Active Navy counterparts. Therefore, distribution of equipment is to be based on the "first to fight shall be equipped first regardless of component" principle specified by DoD.

**Force Structure and Missions.** As of January 30, 1996, the Naval Reserve Force was comprised of about 272,000 members with about 96,000 of those being Selected Reserve (part-time) and Training and Administration of Reserve (full-time). Since September 30, 1993, the part-time Naval Reserve staffing was reduced by about 36,000. The Commander, Naval Air Reserve Force (CNARF), reports to the Commander, Naval Reserve Force. The Commander, Naval Reserve Force, is a field command responsible for the operations, training, administration, and readiness of Naval Reservists. The Navy is relying more heavily on its reserve forces to meet its expanding mission. For example, the Naval Air Reserve Force will be providing significantly more adversary training for tactical aviation and airlift. This and other missions will require the Reserves to increase its total man-hours from about 14 million to 20 million hours by 2001. The Naval Reserve Force will perform this function with Reservists who make up 20 percent of the force while accounting for 3 percent of the Service's overall budget.

### Audit Objectives

The primary audit objective of this report was to evaluate the adequacy of Navy and Marine Corps planning for the transfer of aircraft from the Active Forces and for congressionally directed aircraft procurements. Specifically, we evaluated the adequacy of the Navy planning for training, personnel, manpower, support equipment, and spares for selected aircraft. Those aircraft were the P-3C, F/A-18, and C-130T. Appendix C includes a description of the aircraft we reviewed. The report includes comments about the F-14, based on information obtained while outbriefing the F/A-18. We also reviewed applicable management controls that are related to supportability planning. We performed a limited review of the Marine Corps Reserve's KC-130T. However, the review was not extensive enough to report on the Marine Corps Reserve. See Appendix A for the audit scope, methodology, and the management control program discussion. See Appendix B for a summary of prior coverage related to the audit objectives.



---

## **Finding A. Part-time Reservists Training**

Part-time C-130T and P-3C Reservists spent about 20 percent of their total available annual hours (272) attending non-mission-essential courses. This condition occurred because CNARF did not have adequate procedures to periodically evaluate the relevance of all training courses, especially for part-time Reservists. As a result, these Reservists had less time to take mission-essential courses and, thus, were not fully qualified to perform their operational tasks, including mobilization assignments.

### **Guidance for Reservists' Training**

**DoD Guidance.** DoD Directive 1235.10, "Mobilization of the Ready Reserves," October 24, 1982, requires that the Military Departments ensure that units are trained in their wartime taskings and capable of attaining requisite readiness status before deployment time specified by contingency plans. It further requires that squadron and higher echelons "ensure that Reserve Component individuals and units are trained appropriately for augmenting active forces on mobilization."

**Navy Guidance.** OPNAVINST [Office of the Chief of Naval Operations] 1500.8M, "Navy Training Planning Process," September 18, 1986, requires that Reservists are trained in their wartime taskings. This instruction provides policies and procedures for development of the Navy Training Plan and assigns responsibilities to provide life-cycle manpower, personnel, and training support for total ships, aircraft, systems, subsystems, equipment, and non-hardware-oriented developments. The Navy Training Plan is the principal document defining training, billets, personnel, military construction, and training material requirements to support the introduction and operational use of "new developments," which applies to new aircraft, equipment, system, subsystem, non-hardware, or total ship developments. The Navy Training Plan controls the planning and implementing action for meeting the requirements to produce trained and qualified personnel who install, operate, and maintain the aircraft. The CNARF Instruction 1500.5C, "Aviation Master Training Manual," May 20, 1992, provides a master training manual of aviation training policies and procedures.

## Finding A. Part-time Reservists Training

---

### Training Courses

**Part-time Reservists.** These Reservists are available to the Reserve Unit for about 272 hours a year. Part-time Reservists must obtain both on-the-job and classroom training to meet their qualification standards. Training as well as operational tasks must be performed annually within the 272 hours. Training is either mission- or non-mission-essential.

**Non-mission-Essential.** Part-time Reservists in C-130T and P-3C squadrons spent about 20 percent of their time in non-mission-essential courses, that is, courses that do not directly apply to the Reserve mission for flying aircraft. Approximately one-third of the courses we reviewed are classified as General Military Training, with the Chief of Naval Operations approving the majority. General Navy Training courses are repeated every 2 years, whether or not the individual is a full-time or part-time employee. The remaining two-thirds of courses reviewed are classified as Practical Training with the CNARF approving the majority. Examples of non-mission-essential courses are listed below. A more comprehensive list of examples is in Appendix D.

- o General Navy Training
  - Recreational, Athletic and Home Safety
  - Personal Financial Management
  - Voting
  - Physical Fitness and Sports
- o Practical Training
  - Safety in the Home
  - Vacation Safety Tips
  - Toys and Home Play Equipment
  - Bathroom Hazards/Foul Weather
  - Recreational Swimming and Diving
  - Screwdriver - A Commonly Used and Abused Tool

We based our evaluation upon an analysis of 97 judgmentally selected training records of the 653 records for the 5 squadrons reviewed. We also reviewed 93 questionnaires (total returned) of the 150 self-evaluation Naval/Marine Corps training questionnaires the Inspector General (IG), DoD, prepared to obtain information on Reserve training.

**Mission-Essential.** Non-mission-essential courses use time that personnel could use to attend mission-essential courses. Mission-essential courses are those we defined as directly relating to Naval Aircraft activities. Examples of 1-hour mission-essential courses for the C-130T Reservists are:

- Inertial Navigation System Course No. F47-602-3512
- Electrical Systems Course No. A17-950-0002
- Aircraft Corrosion Course No. A34-950-0002
- Aircraft Fuels and Fluids Course No. A11-950-0002

Examples of 1-hour mission-essential courses for the P-3C Reservists are:

- Weapons Release and Control Course No. PJT-P3C-7498
- Corrosion Prevention/Preserve Course No. M01-P30-0405
- Aircraft Securing Course No. M01-P30-2403
- Passive and Active Acoustics Tactics Course No. A45-210-6131

## Evaluating Training Courses

**Approval for Courses.** The Naval Air Reserve Force did not evaluate the relative priority of either individual training courses or the entire training program at C-130T and P-3C Squadrons for part-time Reservists. The Secretary of the Navy and the Chief of Naval Operations directed many General Navy Training courses to be added incrementally. Practical Training Courses were added as a result of incremental requests from the squadrons. Changing the requirements for General Navy Training courses will require approval from the Secretary of the Navy or Chief of Naval Operations. The CNARF can change the requirements for Practical Training Courses, which make up two-thirds of the non-mission-essential training.

**Navy Training Initiative.** The CNARF took positive action and implemented the reserve job qualification requirements program at the squadron level on June 16, 1993. This program allowed part-time Reservists to attain on-the-job training in lieu of some formalized C-130T and P-3C mission-essential training. The CNARF took positive actions to improve the training opportunities for squadron personnel. The CNARF reviewed and approved the reserve job qualification requirements so the squadrons could meet their specific needs. Training can be provided in several ways: by video, booklets, correspondence courses, or instructors.

## **Finding A. Part-time Reservists Training**

---

### **Qualifications and Readiness**

The two C-130T and three P-3C Squadrons we audited did not have fully trained individuals, which affected the Squadrons' ability to deploy. The Individual Training Plan Summary by Unit Report for part-time Reservists showed the following percentage rates of fully trained individuals able to perform their mission:

C-130T Squadrons - 40 percent, and

P-3C Squadrons - 66 percent.

Since part-time Reservists are not fully trained, full-time Reservists are relied upon to perform most maintenance tasks. When a squadron mobilizes, however, the part-time Reservists must be able to assume full-time responsibilities on a 24-hour basis. Therefore, to efficiently perform in these adverse conditions, adequate mission-essential training must be provided to Reserve personnel before they are mobilized.

### **Recommendations, Management Comments, and Audit Response**

**A.1.** We recommend that the Commander, Naval Air Reserve Force, evaluate the relative priority of training courses for C-130T and P-3C part-time Reservists.

a. For General Navy Training courses that are repetitive or do not directly contribute to the squadron's aircraft mission, request a waiver from appropriate authority.

**Management Comments.** The Department of the Navy partially concurred, stating that General Navy Training is required of all personnel as part of the Total Force concept. Requesting waivers would be contrary to that concept. The requirement for General Navy Training should be greatly reduced with the implementation of OPNAVINST 4790.2F, "The Naval Aviation Maintenance Program," June 1, 1995\*. The new instruction will change the training cycle from every 2 years to once every tour.

**Audit Response.** The issuance of the instruction partially meets the intent of our recommendation. By increasing the training cycle from 2 years to once every tour, which is an increase to approximately 4 years, the number of repetitive courses that part-time Reservists must attend will be reduced. In

---

\*The Navy consolidated response incorrectly referenced OPNAVINST 4790.2F instead of OPNAVINST 1500.22D, "General Military Training," May 27, 1987, which is currently being rewritten.

## Finding A. Part-time Reservists Training

---

response to this final report, we request the Commander, Naval Air Reserve Force, reconsider his position concerning requesting waivers for courses that have limited applicability so as to free up more training time for mission-related training. Waivers are available for some non-standardized General Navy Training courses by contacting cognizant personnel responsible for OPNAVINST 1500.22D. We also request the publication date for the future update of OPNAVINST 1500.22D.

**b. For those courses classified as Practical Navy Training, significantly deemphasize courses that do not directly contribute to the squadron's mission.**

**Management Comments.** The Department of the Navy concurred and will take a more in-depth look at the appropriateness of Practical Training Courses. Many are safety related and are required by Navy instructions. CNARF requires a one-day safety-related annual standdown day. The non-safety-related courses might be provided through read-and-initial boards rather than in-class instruction.

**Audit Response.** The Department of the Navy's response meets the intent of our recommendation. In response to the final report, we request the Navy provide a completion date for its in-depth review.

**A.2. Assess the relevance of squadron-level training through periodic inspections and provide guidance.**

**Management Comments.** The Department of the Navy concurred, stating that Air Wing staff currently conduct periodic inspections of the squadrons within their Wings.

**Audit Response.** The Navy's comments are partially responsive. We request further detailed information on what evaluation criteria the Navy will use for future periodic inspections. The criteria included should identify courses taken by part-time reservists so they can avoid courses that do not directly apply to the warfare mission.

---

## **Finding B. Flight Engineer Manning**

C-130T and P-3C Reserve Aircraft Squadrons we reviewed had shortages of qualified flight engineers of 27 (56 percent) and 39 (46 percent), respectively. The Commander, Naval Reserve Force, authorized too many part-time flight engineer billets, thereby limiting the number of available full-time billets. As a result, the readiness rating of the C-130T and P-3C Reserve Aircraft Squadrons was impaired by their inability to assemble complete flight crews.

### **Flight Engineer Requirements**

**Flight Crew Composition.** Flight crews require a certain number and composition of crew members for each aircraft. A flight crew requires two flight engineers. Each C-130T and P-3C squadron requires a total of 12 and 14 flight crews, respectively. Flight engineer requirements include part-time and full-time Reservist billets. Part-time flight engineer billets are assignable to part-time Reservists already holding an enlisted classification in this category who can maintain periodic recertification/requalification within a normal training cycle.

**Part-time Billet Limitations.** The Bureau of Naval Personnel Manual NAVPERS 18068F, Volume II, "Manual of Navy Enlisted Classification and Occupational Standards, Navy Enlisted Classifications" (Enlisted Classification Manual), October 1995, lists flight engineers as restricted enlisted classifications. The restriction limits the number of part-time Reservist billets to 125 percent of part-time personnel currently holding the enlisted classification. The restriction ensures the number of part-time Reservists in training is not more than 25 percent of those already trained. This manual also requires annual reviews by the Naval Manpower and Analysis Center to ensure that total billet limits are not exceeded.

### **Flight Engineer Shortages**

The two C-130T and three P-3C squadrons we reviewed had shortages of 27 (56 percent) and 39 (46 percent) flight engineers, respectively. Table 1 shows the Bureau of Naval Personnel requirements, the Naval Reserve Force authorizations, flight engineers on board, and shortages (manpower requirements less flight engineers on board) for flight engineers.

## Finding B. Flight Engineer Manning

**Table 1. Manpower Comparisons for C-130T and P-3C Flight Engineers**

C-130T Flight Engineers					
<u>Squadron</u>	<u>Status</u>	<u>Requirements</u>	<u>Authorized</u>	<u>On Board</u>	<u>Shortages</u>
VR-53 (Washington)	Part-time	3	14	3	0
	Full-time	<u>21</u>	<u>10</u>	<u>9</u>	<u>12</u>
	Subtotal	24	24	12	12
VR-55 (Santa Clara)	Part-time	3	14	2	1
	Full-time	<u>21</u>	<u>10</u>	<u>7</u>	<u>14</u>
	Subtotal	<u>24</u>	<u>24</u>	<u>9</u>	<u>15</u>
Total Part-time		6	28	5	1
Total Full-time		<u>42</u>	<u>20</u>	<u>16</u>	<u>26</u>
<b>Totals for C-130T</b>		<b>48</b>	<b>48</b>	<b>21</b>	<b>27</b>
P-3C Flight Engineers					
<u>Squadron</u>	<u>Status</u>	<u>Requirements</u>	<u>Authorized</u>	<u>On Board</u>	<u>Shortages</u>
VP-64 (Willow Grove)	Part-time	13	19	7	6
	Full-time	<u>15</u>	<u>9</u>	<u>9</u>	<u>6</u>
	Subtotal	28	28	16	12
VP-66 (Willow Grove)	Part-time	13	19	3	10
	Full-time	<u>15</u>	<u>9</u>	<u>10</u>	<u>5</u>
	Subtotal	28	28	13	15
VP-94 (New Orleans)	Part-time	13	19	6	7
	Full-time	<u>15</u>	<u>9</u>	<u>10</u>	<u>5</u>
	Subtotal	<u>28</u>	<u>28</u>	<u>16</u>	<u>12</u>
Total Part-time		39	57	16	23
Total Full-time		<u>45</u>	<u>27</u>	<u>29</u>	<u>16</u>
<b>Totals for P-3C</b>		<b>84</b>	<b>84</b>	<b>45</b>	<b>39</b>
<b>Total C-130T and P-3C Part-time</b>			<b>45</b>	<b>21</b>	<b>24</b>
<b>Total C-130T and P-3C Full-time</b>			<b><u>87</u></b>	<b><u>45</u></b>	<b><u>42</u></b>
<b>Total C-130T and P-3C</b>			<b>132</b>	<b>66</b>	<b>66</b>

## Authorizations

**Requirements.** The Naval Manpower and Analysis Center determines total requirements needed in a wartime environment based on taskings in requirements documents. The Commander, Naval Reserve Force, develops a

## **Finding B. Flight Engineer Manning**

---

"billet buy" that identifies the Active (full-time) and Reserve (part-time) personnel mix to fill the positions. The Commander, Naval Reserve Force, is limited to the total billet requirements per squadron established by the Naval Manpower and Analysis Center.

**Part-time Versus Full-time.** Flight engineer shortages occurred primarily because Naval Reserve Force authorized an excessive number of part-time billets, which limited the authorizations for the number of full-time billets. The total number of billets required per squadron is finite. Therefore, exceeding authorized part-time billets necessitates limiting full-time billets. The number of flight engineer billet requirements is a direct function of the 125 percent requirement in the Enlisted Classification Manual applied to the on-board qualified personnel.

**C-130T Aircraft.** The Naval Air Reserve Force has four C-130T aircraft squadrons that require 24 flight engineers per squadron. Currently, eight part-time flight engineers have the required enlisted classification for the four Naval Air Reserve Force squadrons. Therefore, the Enlisted Classification Manual limits the C-130T part-time flight engineer billets to 10 (8 x 125 percent). Four C-130T squadrons would equally allocate 10 flight engineers allowing approximately 3 part-time and 21 full-time reservists per squadron. However, the two squadrons we reviewed have 28 authorized part-time billets, which is significantly more than the 6 billets required. For example, VR-53 had authorized 14 part-time and 10 full-time flight engineer billets. The squadron was only able to fill 3 (21 percent) of the 14 part-time billets authorized; however, the squadron was able to fill 9 (90 percent) of the 10 full-time billets authorized.

**P-3C Aircraft.** The Naval Air Reserve Force has 9 P-3C aircraft squadrons that require 28 flight engineers per squadron, totaling 252 billets. Currently, 91 part-time flight engineers have the required enlisted classification. Therefore, the Enlisted Classification Manual limits the part-time flight engineer billets to 114 (91 x 125 percent). Nine P-3C aircraft squadrons would need to equally allocate 114 flight engineers allowing approximately 13 part-time and 15 full-time Reservists per squadron. However, the three squadrons we reviewed have 57 authorized part-time billets, which is significantly more than the 39 billets required. For example, VP-64 had 19 part-time and 9 full-time flight engineer billets authorized. The squadron was only able to fill 7 (37 percent) of the 19 part-time billets authorized; however, the squadron was able to fill 9 (100 percent) of the 9 full-time billets authorized.

**Recruiting and Training.** The Naval Air Reserve Force cannot completely fill part-time flight engineer billets. Flight engineer vacancies occurred because recruiting goals were overly optimistic and the training program was too long for part-time personnel. Also, recruiting for full-time billets is more successful than recruiting for part-time billets. For example, the squadrons we reviewed were able to fill 96 percent (45/47) of the full-time authorizations and only 25 percent (21/85) of the part-time authorizations.



A part-time Reservist, compared to a full-time Reservist, has more difficulty becoming qualified because of the extended 10- to 11-week flight engineer training course. Part-time Reservists are available only 2 weeks a year and 1 weekend a month (272 hours). Civilian employment demands frequently preclude a recruit's ability to complete the training requirement.

### Impact

The lack of qualified flight engineers for C-130T and P-3C Reserve Aircraft Squadrons resulted in incomplete flight crews, which impaired the squadron's readiness. The number of available flight crews is a critical element in determining squadron readiness. Two flight engineers per flight crew were needed to complete operational missions. The five squadrons we reviewed had the following flight crew shortages:

- o Each C-130-T squadron has four aircraft. Squadron VR-53 has 12 flight engineers who can man 6 out of 12 (50 percent) required flight crews. Squadron VR-55 has 9 flight engineers who can man 5 out of 12 (41 percent) required flight crews.

- o Each P-3C squadron has eight aircraft. Squadrons VP-64 and VP-94 have 16 flight engineers who can man 8 of the 14 (57 percent) required flight crews. Squadron VP-66 has 13 flight engineers who can man 7 of the 14 (50 percent) required flight crews.

### Conclusion

We recognize restrictions on total personnel end strength for the Naval Reserve Force. However, reallocating part-time and full-time billets would make more full-time positions available for recruitment of critical enlisted classification personnel, such as flight engineers, and reduce full-time personnel in non-critical positions, which have less stringent training requirements.

### Recommendation, Management Comments, and Audit Response

**B. We recommend the Commander, Naval Reserve Force, modify flight engineer authorizations and recruit to reflect the part-time and full-time distribution required by the Bureau of Naval Personnel Manual NAVPERS 18068F, Volume II.**

## **Finding B. Flight Engineer Manning**

---

**Management Comments.** The Department of the Navy partially concurred, stating that lack of qualified flight engineers was a persistent problem known long before the audit reported it. Part-time Reservists cannot easily attend flight engineer courses due to the lengthy time required. Much of the work is done by full-time Reservists, causing them tremendous strain due to the excessive workload. CNARF has taken action to shift from part-time to full-time billets to reduce the persistent problem.

**Audit Response.** The proposed action meets the intent of our recommendation. We request that the Department of the Navy provide an estimated completion date for the proposed action. We knew the Navy was aware of the flight engineer shortages; however, our audit identified that the recruiting emphasis was on part-time rather than full-time personnel. This emphasis did not parallel the Enlisted Classification Manual guidance. With full-time flight engineer recruitment, workload imbalance should be alleviated.

---

## Finding C. Manpower for Adversary Training

Naval Air Reserve Force F/A-18 and F-14 Squadrons may not have sufficient manpower for both missions of crisis response and fleet contributory support for adversary training. Disestablishing two Active and five Reserve squadrons by the Chief of Naval Operations for FY 1994 increased the amount of adversary training the remaining five Reserve squadrons provided. The Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessment), Air Warfare Division (Air Warfare Division), had not updated the Required Operational Capability (ROC)/Projected Operational Environment (POE) statements so that manpower requirements could be recalculated to reflect the above changes. Consequently, readiness has been affected for the crisis response mission and the ability to fully perform all necessary adversary training may be affected.

### Development of Manpower Requirements

**Adversary Training.** To provide training under simulated combat conditions, some aircraft act as the adversary to improve readiness. The Reserves are fulfilling the adversary role more often to provide support to the Active components.

**ROC/POE.** ROC statements for Reserve F/A-18 and F-14 squadrons specify the squadron's primary missions of crisis response and fleet contributory support for adversary training. The POE establishes the most demanding operating environment a squadron must be manned for, based on the primary missions in the ROC. The critical elements in determining the most demanding operating environment are the primary aircraft authorization and the aircraft utilization rates, the sortie length, the crew seat ratio, the Navy standard workweek, and the additional manpower requirements.

**Squadron Manpower Document.** Office of the Chief of Naval Operations Instruction 5310.18B, "Fleet Manpower Requirements Development and Review Procedures," November 23, 1993, provides procedures for the Naval Manpower and Analysis Center to develop aviation squadron manpower requirements, based on the current ROC/POE statement. The process requires development of a maintenance man-hour per flight hour regression model for the aircraft type, model, and series. Then the POE elements and the maintenance man-hour per flight hour model are applied to staffing standards to develop the workload per week for each workcenter. Squadron Manpower Documents delineate aviation squadrons' manpower requirements. Instruction 5310.18B specifies that any delay in issuing a Squadron Manpower Document adversely impacts updating a unit's activity manpower document, the single official statement of organizational manning and billets authorized. The Instruction states that Squadron Manpower Documents will normally be issued

## **Finding C. Manpower for Adversary Training**

---

every 3 years; however, due to the dynamic nature of the programming actions affecting aviation squadrons, these documents may be recomputed more frequently.

### **Adversary Training Performed by the Reserves**

**Initial Squadrons Disestablished.** Four Active and two Reserve adversary squadrons performed Navy adversary training before FY 1994. On October 1, 1993, two Active adversary squadrons were disestablished, and the Chief of Naval Operations transferred the adversary training mission to the four Reserve F/A-18 Strike Fighter and four Reserve F-14 Fighter squadrons in the two Carrier Air Wings Reserve squadrons. As a result, both the Carrier Air Wings Reserve-20 and -30 squadrons had dual missions of crisis response and fleet contributory support. The fleet contributory support includes the adversary training mission.

The Reserve F/A-18 Strike Fighter and F-14 Fighter Squadrons' mission to provide adversary training, in addition to the primary crisis response mission, was incorporated into the F/A-18 and F-14 ROC/POE statements May 28, 1993, and November 7, 1994, respectively. The F-14 ROC/POE also reflected changes that are discussed below.

**Additional Squadrons Disestablished.** The result of the disestablishment of Carrier Air Wing Reserve-30 during June 1994 reduced the Reserves by two F/A-18 Strike Fighter squadrons and three F-14 Fighter squadrons (one from Carrier Air Wing Reserve-20). Carrier Air Wing Reserve-20 was left with two F/A-18 Strike Fighter squadrons, one F-14 Fighter squadron, and two F/A-18 Fleet Composite squadrons to perform the adversary training of the original 10 squadrons. Moreover, the last two Active adversary squadrons were disestablished by March 31, 1996. Table 2 shows the total squadrons that will be available to provide adversary training for the Navy after April 1, 1996, and the squadron allocation as of October 1, 1993.

## Finding C. Manpower for Adversary Training

---

**Table 2. Reduction of Adversary Training Squadrons**

<u>Active</u>	<u>Number of Squadrons</u>	
	<u>October 1, 1993</u>	<u>April 1, 1996</u>
F/A-18 Strike Fighter (Adversary) Squadron	1	0
F-14 Fighter (Adversary) Squadron	1	0
<u>Carrier Air Wing Reserve-20</u>		
F/A-18 Strike Fighter Squadron	2	2
F-14 Fighter Squadron	2	1
F/A-18 Fleet Composite (Adversary) Squadron	1	2
<u>Carrier Air Wing Reserve-30</u>		
F/A-18 Strike Fighter Squadron	2	0
F-14 Fighter Squadron	2	0
F/A-18 Fleet Composite (Adversary) Squadron	1	0

### **F/A-18 and F-14 ROC/POE**

Since the 1993 revision, the Air Warfare Division did not modify the F/A-18 ROC/POE to reflect the additional increase in Carrier Air Wing Reserve-20's fleet contributory support for adversary training. The F-14 ROC/POE was updated after the disestablishment of Carrier Air Wing Reserve-30. However, it had not been modified to reflect the subsequent disestablishment of the last two Active adversary squadrons.

Part-time Reservists are available only for 1 weekend a month and for one 2-week training period a year. An adversary training detachment is normally 2 weeks long and performed away from the Reserve squadron location; thus, part-time Reservists cannot normally participate in an adversary detachment. Historically, full-time Active duty and full-time Reserve personnel have performed the majority of adversary training.

Based on discussions with representatives of the IG, DoD, Air Warfare Division personnel initiated action to modify the F/A-18 and F-14 ROC/POE statements. As of March 1996, cognizant personnel indicated that the F-14 ROC/POE was essentially completed. However, status was not available on the F/A-18 ROC/POE. Air Warfare Division should forward the completed ROC/POE to

## **Finding C. Manpower for Adversary Training**

---

the Naval Analysis and Manpower Center for recalculation of manpower requirements for all Reserve F/A-18 Strike Fighter and F-14 Fighter squadrons. The ROC/POE should reflect the changes in the operating environment affecting Carrier Air Wing Reserve-20.

### **Impact**

Balancing priorities for crisis response and adversary training has affected readiness for the crisis response mission and may affect the Reserve squadrons' ability to fully perform all necessary adversary training.

**Crisis Response.** Carrier Air Wing Reserve-20's most critical mission is crisis response in the event of deployment. The CNARF decreased the readiness rating for this mission to allow for the increase in adversary training. Crisis response readiness will only be allowed to decrease to a specified level with the assumption of the total adversary training requirement. At this level, further increases in adversary training will be limited.

**Adversary Training.** During FY 1995, Reserve F/A-18 Strike Fighter and F-14 Fighter squadrons spent fewer than 20 percent of their flight hours on adversary missions. With the elimination of the last two Active adversary squadrons in March 1996, the remaining Strike Fighter and Fighter squadrons adversary workload may increase as much as 50 percent. Moreover, the Reserve Composite (adversary) squadrons' workload will increase by an undeterminable amount as a result of the remaining Active squadrons being eliminated. Without an updated ROC/POE, these Reserve squadrons will not be assigned adequate manning to accomplish all required adversary training.

### **Recommendation, Management Comments, and Audit Response**

**C.** We recommend that the Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessment), Air Warfare Division, update the Required Operational Capability/Projected Operational Environment statements to reflect simultaneous dual missions and the resulting effects on the Reserve F/A-18 and F-14 squadrons and provide the update to the Naval Manpower and Analysis Center.

**Management Comments.** The Department of the Navy concurred and has taken action to recognize the dual mission requirements for the Reserve F/A-18 and F-14. The estimated completion date for the manpower document was August 1996.

## Finding C. Manpower for Adversary Training

---

**Audit Response.** The actions taken by the Department of the Navy meet our intent to adjust manpower for Reserve adversary manpower requirements. We contacted cognizant personnel and confirmed that the proposed action has been completed.

---

## Finding D. Support Equipment and Spare Parts

Three Naval Reserve P-3C squadrons lacked a quantity of 10 critical support equipment items valued at \$0.7 million, and two C-130T and two F/A-18 squadrons lacked a quantity of 125 critical spare parts valued at \$3.5 million. These shortages occurred because:

- o Naval Air Systems Command (NAVAIR) did not distribute support equipment on a fair share basis to P-3C squadrons.

- o Air Warfare Division did not develop adequate budgets to provide spare parts for C-130T squadrons through the flight hour rates.

- o NAVAIR and Air Force Materiel Command did not adequately coordinate spare part requirements to support the C-130T.

- o CNARF and the Commander in Chief, U.S. Atlantic Fleet, did not submit Allowance Change Requests that provided adequate spares inventory to repair F/A-18 aircraft due to insufficient transportation time.

Consequently, Naval Reserve C-130T (8 aircraft), P-3C (24 aircraft), and F/A-18 (24 aircraft) squadron aircraft were inoperable for extended periods. Based on the results of our audit, Navy personnel took significant action to correct a quantity shortage of 1197 items of C-130T support equipment valued at \$5.6 million.

## Policy and Responsibilities

**DoD Policy.** DoD Directive 1225.6, "Equipping the Reserves Forces," November 1992, states that new and combat-serviceable equipment with associated support equipment should be distributed to units scheduled to be deployed or employed first, irrespective of Component. The DoD philosophy "fight first shall be equipped first regardless of component" provides the Reserves' priority in equipment, spares, and repair parts. DoD Directive 4140.1, "Material Management Policy," January 14, 1993, contains the policies and procedures for material management in the Defense supply system.

**Navy Policy.** NAVAIR Instruction 13650.1C, "Naval Air Systems Command Aircraft Maintenance Material Readiness List Program," January 16, 1992, provides policy and procedures for the management (distribution and redistribution) of in-use aviation maintenance support equipment inventory. The instruction requires that support equipment be periodically reviewed to determine surplus, and the excess should be redistributed. NAVAIR monitors the return of surplus support equipment for redistribution. Naval Supply Instruction P4440.160A, "Policy for Management of Authorized Stock Levels



## Finding D. Support Equipment and Spare Parts

---

for Navy Depot Field Repairables," February 26, 1986, requires identification of excess parts to the supply system as available for redistribution. Aviation Supply Office Field Instruction 4441.16J, "Shorebased Consolidated Allowance Lists Policy, Procedures and Responsibilities," August 4, 1994, states that approved changes to the Weapon System Planning Document, such as an increase in flying hours, should be provided to the Aviation Supply Office to ensure that supply support is adjusted accordingly. Commanders responsible for using the equipment (Type Commander) will provide requirements to support approved changes.

**NAVAIR.** The NAVAIR Program Offices for the C-130T, P-3C, and F/A-18 have oversight responsibility for providing support equipment to organizational and intermediate-level maintenance facilities. In addition, the program offices are responsible for providing initial spare parts to the Reserve squadrons during site activation, with replenishment and repair of spares being funded through the flight hour program. The flight hour program provides funds for fuel, repair of spare parts off-site, and consumable parts used in maintenance facilities. Funds for these items are estimated based on anticipated flight hours. The NAVAIR Aviation program manager is the primary support equipment controlling authority and is responsible for redistributing and coordinating procurement priorities and delivery of support equipment among the secondary authorities. Secondary authorities are representatives of a major command that exercise administrative control over maintenance support equipment. Secondary authorities are located at major aviation commands, which include Naval Air Force, U.S. Atlantic Fleet; Naval Air Force, U.S. Pacific Fleet; and Naval Air Reserves Force.

**Navy Inventory Control Point, Philadelphia.** Formerly the Aviation Supply Office, the Naval Inventory Control Point established requirements for aviation repairable fixed allowances to provide optimum supply support and operational readiness during peacetime. Aviation repairable fixed allowances are computed based on factors such as the squadron workload, maintenance, capability, and flying hours.

### Status of Critical Support Equipment and Repairable Spare Parts

C-130T, P-3C, and F/A-18 aircraft were provided to the Naval Air Reserve Force without critical support equipment and repairable spare parts. The support equipment and repairable spare parts shortages are for critical and peculiar items that can cause prolonged periods of aircraft inoperability. Support equipment includes items maintenance facilities used to test, troubleshoot, align, or calibrate aircraft systems such as avionics test equipment. Repairable spare parts are items in the aircraft that can be reconditioned for reuse, such as directional compasses and antennas. C-130T and P-3C aircraft maintenance facilities had deficits on 1,207 items totalling an estimated \$6.3 million at the Naval Air Facility (NAF) and Naval Air Stations (NAS) as shown in Table 3. Significant action has been taken to correct the C-130T shortages.

## Finding D. Support Equipment and Spare Parts

**Table 3. Support Equipment Critical Shortages  
Total More Than \$6 Million**

### Organizational Maintenance Level Facilities

<u>Aircraft</u>	<u>Air Station</u>	<u>Critical Shortages</u>		
		<u>Quantity</u>	<u>Equip Items</u>	<u>Amount</u>
C-130T	NAS Santa Clara	66	49	\$ 155,606
	NAF Washington	<u>30</u>	<u>24</u>	<u>93,364</u>
<b>Subtotal Organizational Level</b>		<b>96</b>	<b>73</b>	<b>\$ 248,970</b>

### Intermediate Maintenance Level Facilities

<u>Aircraft</u>	<u>Air Station</u>	<u>Critical Shortages</u>		
		<u>Quantity</u>	<u>Equip Items</u>	<u>Amount</u>
C-130T	NAS Santa Clara	555	156	\$ 3,034,000
	NAF Washington	<u>546</u>	<u>137</u>	<u>2,303,000</u>
<b>Subtotal</b>		<b>1,101</b>	<b>293</b>	<b>\$ 5,337,000</b>

<u>Aircraft</u>	<u>Air Station</u>	<u>Critical Shortages</u>		
		<u>Quantity</u>	<u>Equip Items</u>	<u>Amount</u>
P-3C	NAS Willow Grove	4	4	314,000
	NAF Washington	5	5	334,000
	NAS New Orleans	<u>1</u>	<u>1</u>	<u>40,000</u>
<b>Subtotal</b>		<b><u>10</u></b>	<b><u>10</u></b>	<b>\$ <u>688,000</u></b>
<b>Subtotal Intermediate Level</b>		<b><u>1,111</u></b>	<b><u>303</u></b>	<b>\$ <u>6,025,000</u></b>
<b>Total</b>		<b>1,207</b>	<b>376</b>	<b>\$ 6,273,970</b>

The P-3C had fewer deficiencies because the C-130T had less historical data to determine what support equipment needed to be in the inventory.

C-130T and F/A-18 aircraft supply organizations had 125 repairable spare part shortages totalling an estimated \$3.5 million at the NAF and NAS shown in Table 4.

## Finding D. Support Equipment and Spare Parts

**Table 4. Repairable Spare Parts Critical Shortages  
\$3.5 Million for Two Aircraft**

<u>Aircraft</u>	<u>Air Station</u>	<u>Critical Shortages</u>		
		<u>Quantity</u>	<u>Parts</u>	<u>Amount</u>
C-130T	NAS Santa Clara	20	20	\$ 41,000
	NAF Washington	43	25	28,000
<b>Subtotal</b>		<b>63</b>	<b>45</b>	<b>\$ 69,000</b>
F/A-18A	NAS New Orleans	52	35	2,697,000
	NAS Oceana	10	8	722,000
<b>Subtotal</b>		<b>62</b>	<b>43</b>	<b>\$ 3,419,000</b>
<b>Total</b>		<b>125</b>	<b>88</b>	<b>\$ 3,488,000</b>

### Support Equipment Redistribution

**Fair Share Distribution.** NAVAIR did not redistribute support equipment on a fair share basis to the Reserve C-130T and P-3C Squadrons. Maintenance facilities at Active NASs had a disproportionate share of required equipment. NAVAIR is the primary authority responsible for monitoring the redistribution of support equipment excesses so that the Navy maximizes utilization. Examples of equipment that could be redistributed are the C-130T test set integrator and the P-3C avionics test bench.

**C-130T Support Equipment Distribution.** The Support Equipment Control Authority summary report dated October 18, 1995, for the test set interrogator documented that the type commanders (Active) had a total surplus of 38 interrogators while the Naval Air Reserve Force had a deficit of two. The goals enumerated in DoD Directive 1225.6 could be achieved by making a fair share distribution between the Active and Reserve Navy. The test set interrogator tests equipment in the aircraft that identifies whether the other aircraft is friend or foe.

**P-3C Test Benches.** Avionics test benches were not distributed by Active aircraft intermediate maintenance facilities to the Naval Air Reserve Force as required by DoD Directive 1225.6. NAS Willow Grove, NAF Washington, and NAS New Orleans P-3C maintenance facilities had a deficit of 10 avionic test benches estimated at \$688,000. The 10 test benches are included in the shortages in Table 3. The Fleet maintenance facilities had five avionic test benches above authorized amounts. Maintenance facilities use avionics test benches to troubleshoot, test, and calibrate aircraft electronic systems. Aircraft are unable to fly while waiting for parts to be shipped and returned. With the test benches, the repairs could have been done on-site, thus reducing the waiting time.

## **Finding D. Support Equipment and Spare Parts**

---

### **Flight Hour Budget**

**Budgeted Flight Hours.** The Air Warfare Division underestimated C-130T Squadron budgeted flight hour requirements that provide funding for spare parts. The actual additional flight hours required to support the Active Navy created an excessive demand on the C-130T support system. These extra hours exceeded the budgeted flight hour rate causing shortages of spares. All direct costs for spares were budgeted based on estimated flying hours the Active Navy provided.

**Actual Flight Hours.** For FYs 1994 and 1995, NAS Santa Clara and NAF Washington C-130T Squadrons exceeded their annual 7,200-hour budget by 3,175 and 5,074 hours, respectively. Budgeted flight hours should not be exceeded because of the adverse effects on spares provided through the applied rate. Due to the additional hours flown for FYs 1994 and 1995, the C-130T flight hour program was underfunded by \$3.9 million. Congress appropriated the additional \$3.9 million for the C-130T flight hour program.

**Budget Versus Actual.** The discrepancy between actual and budgeted hours occurred because the Naval Air Reserve Force C-130T squadrons flew additional flight hours to support fleet taskings that were not included in the original budget. Original estimates did not include known Pacific and Atlantic Fleet requirements including increases in transport support for Mediterranean and Pacific operations. These increases were needed to offset the disestablished transport squadrons in Spain, Italy, and Guam. Additionally, unfunded requirements resulted from the FY 1995 C-130T flight program funding rate that included only 2 squadrons, rather than 4, with a total of 8 aircraft rather than 14.

**Flight Hour Input.** The Air Warfare Division developed the Navy aircraft flight hour program funding requirements from Active Type Commanders input submitted on predicted usage of Navy aircraft. The Commander, Naval Reserve Force, is responsible for administration of C-130T flight hour program and must decide whether to fly more hours than those used to develop the budget.

### **Air Force Support**

The Air Force did not provide the Navy with a level of support that maintained C-130T readiness for repairable spare parts. The Naval Air Reserve Force, NAVAIR, and Air Force Materiel Command had no formal agreement regarding C-130T support, pertaining to planning, prioritizing, procuring, and repairing spare parts.

**NAVAIR C-130T System Program Office.** Air Force Materiel Command, Warner Robins Air Logistics Center, and NAVAIR C-130 System Program Office have overall responsibility for procurement and logistical support of DoD

## Finding D. Support Equipment and Spare Parts

---

C-130 aircraft. The Air Force Materiel Command is also the primary inventory control point for most C-130 aircraft parts. Naval Inventory Control Point, Philadelphia, is responsible for provisioning supply support for Navy C-130T aircraft. Procurement and repair of Navy spares is coordinated between the Warner Robins Air Logistics Center and the Naval Inventory Control Point.

**Navy Requisitions in Air Force Supply System.** Naval Inventory Control Point item managers did not have access to information in the Air Force supply system. Additional information would have allowed for knowledge of proper configuration control reasons for shortages, requirements for field usage, and excessive back orders. With this additional information, Navy item managers could have been more effective in resolving shortages. Initial spare parts allowances were based upon Navy item managers' estimates and then later revised according to actual usage data. Navy C-130T squadron supply requisitions are processed in the Air Force supply system without providing information to the Naval Inventory Control Point. For example, the number one mission degrader for Navy C-130T aircraft during 1994 was the gyroscope, a directional compass all C-130 aircraft use. Configuration control was lost between the Services, causing Navy gyroscope shortages. In 1994, the Air Force had more than 500 back orders. Since the Air Force mission predicated a higher priority code for the gyroscope than the Navy mission, the Air Force received the repaired parts first. The Navy C-130T aircraft experienced 13,839 inoperable hours because aircraft did not have this item as reported in the C-130T Readiness Tracking Report. The NAF Washington C-130T Navy squadron waited 429 days to receive a gyroscope. The Navy item managers would have been aware of the cause of the gyroscope shortages by having access to the Air Force supply system information.

**Lack of Communication.** The C-130 repairable spare part shortages was also caused by the lack of effective communication between Air Force Materiel Command and the C-130 NAVAIR System Program Office on the repair and procurement of Reserve C-130T spares. The Air Force Materiel Command did not inform the NAVAIR of its decision to cancel procurement of stainless steel bleed air ducts because of corrosion failures on Air Force aircraft. Reserve C-130Ts were being returned to the Navy squadrons from an Air Force maintenance depot with overage stainless steel bleed air ducts installed, necessitating daily maintenance inspections until the bleed air ducts could be replaced. Navy engineers determined that the cancelled stainless steel bleed air ducts were suitable for Navy aircraft because, unlike the Air Force, the Navy periodically replaces its bleed air ducts. Had the Air Force communicated with the Navy before cancelling the procurement of stainless steel bleed air ducts, the additional unscheduled maintenance hours incurred for the daily inspections may not have occurred.

## Spare Part Transportation Allowance and Redistribution

**Spare Transportation Time.** F/A-18 Squadrons did not have adequate spare parts since allowance change requests had not been submitted to increase

## **Finding D. Support Equipment and Spare Parts**

---

transportation allowances. Because squadrons did not request realistic transportation time for spares being repaired, adequate spares were not available. The spares were in transit instead of in the supply inventory. Naval Inventory Control Point, Philadelphia, officials calculated repairable spare part allowances using transportation times that were less than the DoD standards. By not including adequate transportation times in allowance calculations for spare parts that are repaired off-site, the F/A-18 Squadrons did not have adequate spare parts on hand. The readiness was degraded due to inadequate parts at Reserve squadrons NAS Oceana and NAS New Orleans, which needed increased transportation because they have spare parts repaired off-site at NAS Cecil Field. The CNARF is responsible for the Reserve NAS New Orleans and the Commander in Chief, U.S. Atlantic Fleet, is responsible for the Active NASs at Oceana and Cecil Field. Allowance change requests are required by Aviation Supply Office Field Instruction 4441.16J, "Shorebased Consolidated Allowance Lists Policy, Procedures and Responsibilities," August 1, 1994.

**NAS Oceana.** Naval Inventory Control Point calculated NAS Oceana F/A-18 repairable spare part allowances with an insufficient number of transportation days. Naval Inventory Control Point allowed 6 days for roundtrip transportation time for F/A-18 spare parts between NAS Oceana, Virginia, and NAS Cecil Field, Florida, including time in the processing departments. Total transportation time includes packaging, processing, and traveling time between locations. The DoD standard roundtrip traveling time alone between Virginia and Florida is 8 days, making the 6 days an impossibility. NAS Oceana F/A-18 repairable spare parts' actual transportation time averaged 14 days. Using insufficient transportation time in spare parts allowance calculations will not provide an adequate supply of spare parts and results in an allowance that cannot support the squadron's mission. The 8-day (14 minus 6) shortage for transportation time contributed to the 10 critical repairable parts shortages valued at \$722,000. For example, the squadron at NAS Oceana is authorized one spare display unit. The squadron had been operating 67 days without a display unit because of an insufficient authorization for spare parts.

**NAS New Orleans.** Naval Inventory Control Point used only 7 days for NAS New Orleans F/A-18 spare parts total transportation time between Florida and Louisiana; the DoD standard for trucking time alone is 10 days. NAS New Orleans F/A-18 repairable spare parts actual transportation time averaged 18 days. The 11-day (18 minus 7) shortages for transportation time contributed to the 52 critical repairable parts shortages valued at \$12.7 million. For example, the squadron at NAS New Orleans had one type of F/A-18 antenna that broke 19 times during FY 1995. The allowance for the F/A-18 antenna at New Orleans was listed as zero. Using the actual transportation time of 20.5 days, the allowance calculation would increase to three instead of zero. Because the allowance calculation for the antenna included 7 days instead of 20.5 for transportation time, the squadron operated a total of 256 additional days without the antenna.

**Redistribution of Surplus Spares.** NAS Cecil Field did not follow stock maintenance procedures for F/A-18 repairable spare parts. Navy Supply Instruction P4440.160A, "Policy for Management of Authorized Stock Levels

## Finding D. Support Equipment and Spare Parts

---

for Navy Depot Field Repairables," February 26, 1986, requires excess parts in the supply system be identified and made available for redistribution. NAS Cecil Field did not identify 26 of 32 parts that we judgmentally sampled as surplus F/A-18 repairable spare parts. The surplus parts valued at \$12.4 million at NAS Cecil Field could have reduced the total \$3.4 million shortage at NASs New Orleans and Oceana.

**Spare Parts Requirements Budget Submission.** The U.S. Atlantic Fleet omitted NAS Atlanta's spare parts requirements for two F/A-18 reserve squadrons in its final Base Realignment and Closure (BRAC) budget submission in 1995. The Reserve squadrons are relocating from NAS Cecil Field to NAS Atlanta in FYs 1997 and 1998. According to Navy Comptroller Notice 7111, "Guidance for the Preparation of FY 1997 Budget Estimates for the Department of Navy Budget Review," March 20, 1995, U.S. Atlantic Fleet is responsible for submitting a BRAC budget exhibit for its closing activities. The NAS Cecil Field and NAS Atlanta's BRAC budget proposals for FY 1996 indicated that NAS Atlanta would require \$20 million for F/A-18 spare parts unless U.S. Atlantic Fleet provided the parts for the initial spares requirement. As of October 12, 1995, Naval Inventory Control Point had budgeted approximately \$3.0 million for FY 97 and \$2.3 million for FY 1998 for NAS Atlanta F/A-18 spare parts, well short of the \$20 million requirement. As a result, NAS Atlanta faces a potential shortfall of \$14.7 million for spare parts for the two relocating F/A-18 reserve aircraft squadrons. U.S. Atlantic Fleet did not include funding for NAS Atlanta F/A-18 spare parts from its BRAC budget proposals.

### Impact of Material Shortages

The Naval Air Reserve Force C-130T, P-3C, and F/A-18 aircraft were inoperable for extended periods because of support equipment and spare part shortages:

- o The eight C-130T aircraft located at NAS Santa Clara and NAF Washington were inoperable approximately 18,773 hours due to lack of supplies and an additional 9,922 hours for unscheduled maintenance from August 1994 through July 1995.
- o Transitional P-3C aircraft squadrons at NAS Willow Grove and NAS New Orleans incurred additional transportation time because parts had to be shipped off-site for repair due to lack of on-site support testing equipment.
- o The 24 F/A-18 reserve aircraft at NAS New Orleans and NAS Oceana were inoperable approximately 41,419 hours due to the lack of supplies from September 1994 through August 1995.

## **Finding D. Support Equipment and Spare Parts**

---

- o U.S. Atlantic Fleet omission of F/A-18 spare part requirements from the BRAC budget submission created a potential \$14.7 million shortfall of F/A-18 spare parts for two Reserve squadrons relocating to Atlanta in FYs 1997 and 1998.

### **C-130T Management Actions**

During April 1996, we received C-130T documentation showing significant action had been taken to resolve the support equipment shortages. Therefore, this report does not include a recommendation for the C-130T support equipment. During our audit, the NAVAIR C-130T System Program Office initiated several working group meetings in conjunction with Warner Robins Air Logistics Center to resolve logistical support issues on the C-130T aircraft. In May 1995, NAVAIR held its first in 4 years C-130T Integrated Logistics Support Management Team meeting; officials from Air Force Materiel Command, Warner Robins (Program Office), and Tinker Air Logistics (Depot Repair Center) briefed on Navy support issues. We commend NAVAIR and Air Force Materiel Command officials' efforts to resolve logistical supply issues. However, an established agreement outlining the plans and prioritization for procurement and repair of C-130T spare parts developed between Air Force Materiel Command and NAVAIR would provide a means to measure and reevaluate the effectiveness of supply support that the Air Force provides to the Navy.

### **Recommendations, Management Comments, and Audit Response**

**D.1.** We recommend that the Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessments), Air Warfare Division, develop realistic C-130T aircraft flight hour requirements upon which to base adequate consumable and repairable spare parts to support the C-130T aircraft.

**Management Comments.** The Navy concurred and took appropriate action by increasing the projection for FYs 1996 and 1997 Program Objective Memorandums to 11,065 hours per year. The Weapons Planning Document dated November 29, 1995, was updated and the Naval Inventory Control Point was notified of upcoming spares requirements.

**Audit Response.** The Navy response is partially responsive. However, the increased budgeted hours are inadequate to meet projected flight hour requirements. The increase to 11,065 annual hours will not fully meet the requirements for 1997 and beyond. The projected logistics requirement for FY 1997 and FY 1998 and beyond is 16,000 hours and 14,000 hours,



## Finding D. Support Equipment and Spare Parts

---

respectively. Again, this shortfall will impact on obtaining spare parts. Unless the budgeted hours are increased further, or the logistics requirements are reduced for FY 1997 and beyond, a shortfall will continue, albeit less due to the currently increased budget hours. In response to this final report, we request the Navy reconsider increasing budgeted flight hour requirements for FY 1997 and beyond to prevent spares shortages and provide a completion date for proposed actions.

### **D.2. We recommend that the Commander, Naval Air Systems Command:**

#### **a. Identify excess inventory that can be used to reduce P-3C and C-130T shortages.**

**Management Comments.** The Navy concurred, stating a 1996 C-130 review validated that processes are in place to ensure procurements do not exceed requirements. The Navy Inventory Control Point identified the "test set interrogator" used as an example in our report was not ordered because it was listed as excess. Further, the Type Commander is satisfied with support equipment purchases and redistribution is occurring according to policy.

Procurements of P-3C support equipment occurred as the aircraft was introduced to the Reserves. No additional procurements occurred since base closures and decommissionings were expected to provide excess support equipment for redistribution. The Department of the Navy stated the effectiveness of the system is demonstrated by the small number of items listed in the audit report.

**Audit Response.** The Navy's comments are responsive. However, our report listed only the critical degraders for the P-3C support equipment deficits that are part of a more pervasive problem. The complete shortage list provides additional items that need monitoring to ensure effective support equipment redistribution from decommissioned squadrons and base closures. The Navy needs to continue its efforts on both critical and non-critical items.

#### **b. Provide fair share distributions of P-3C support equipment to Naval Air Reserve Force maintenance facilities.**

**Management Comments.** The Navy concurred and provided the status of the 10 items referenced in Table 3 of the report. Plans for providing five items are in process, two items are completed, and three items will be resolved with the decommissioning of NAF Washington.

**Audit Response.** The Navy's actions are responsive. We request estimated completion dates for the three remaining items.

#### **c. Develop a Memorandum of Agreement with the Air Force Materiel Command for C-130T spare parts support. As a minimum, such an agreement should provide for procurement and repair priorities between the Services, configuration control information, supply status information, and points of contact with periodic meetings.**

## **Finding D. Support Equipment and Spare Parts**

---

**Management Comments.** The Navy agreed to develop a Memorandum of Agreement with the Air Force Materiel Command for C-130 spare parts support and to conduct periodic meetings and discuss procurement and logistic issues. The Navy did not concur to establish a Memorandum of Understanding.

**Audit Response.** The Navy's comments are responsive. In response to this final report, the Navy needs to provide an estimated completion date for the Memorandum of Agreement. However, we agree with the Navy that a Memorandum of Understanding would not be appropriate since it requires no commitment on the parties where a Memorandum of Agreement does. We did not recommend a Memorandum of Understanding in the draft report.

### **D.3. We recommend that the Commander, Naval Air Reserve Force:**

**a. Submit Allowance Change Requests for additional spare part transportation time to support the Reserve F/A-18 squadron's mission at Naval Air Station New Orleans.**

**Management Comments.** The Navy nonconcurrent regarding the submission of Allowance Change Requests for additional transportation time at the Reserve F/A-18 Naval Air Station New Orleans. The allowance is set at the maximum of 20 days. Also, full intermediate level maintenance capability, which was not developed during the audit, is now established.

**Audit Response.** The actions taken by the Navy meet the intent of our recommendation. As a result, the number of components that will be shipped has been significantly reduced, thereby reducing the need for submitting Allowance Change Requests.

**b. Develop spare parts requirements for Naval Air Station Atlanta to support operational realignment.**

**Management Comments.** The Navy concurred and took action that will increase spares support for the F/A-18 operations at NAS Atlanta and NAS New Orleans. A new concept will have NAS Atlanta performing only organizational level maintenance and intermediate level maintenance will occur at NAS New Orleans. Approval and funding of \$2.6 million has occurred to support organizational level maintenance, and consumable allowances are being reviewed. Intermediate level maintenance spare part requirements were adjusted in April 1996 to reflect the increase in aircraft from 12 to 36 due to the addition of two squadrons.

**D.4. We recommend that the Commander in Chief, U.S. Atlantic Fleet:**

**a. Submit Allowance Change Requests for additional spare part transportation time to support the Reserve F/A-18 squadron's mission at Naval Air Station Oceana.**

**Management Comments.** The Navy concurred and agreed to submit Allowance Change Requests for additional spare part transportation time to support F/A-18 aircraft at Naval Air Station Oceana.

**Audit Response.** The Navy's comments are responsive. In response to this final report, we request that the Navy provide an estimated completion date for the proposed action.

**b. Redistribute excess spare parts from Naval Air Station Cecil Field to locations with shortages.**

**Management Comments.** The Navy concurred to redistribute excess spare parts for Naval Air Station Cecil Field to locations with shortages.

**Audit Response.** The Navy's comments satisfy the intent to redistribute excess parts. However, we request that the Navy provide the completion date of the proposed action.

**c. Provide the required F/A-18 spare parts to Naval Air Station Atlanta that support its operational realignment based on requirements established in Recommendation D.3.b.**

**Management Comments.** Liaison with CNARF stated that spares support will increase for the F/A-18 operations at NAS Atlanta and NAS New Orleans. A new concept will have NAS Atlanta performing only organizational level maintenance and intermediate level maintenance will occur at NAS New Orleans. Approval and funding of \$2.6 million has occurred to support organizational level maintenance, and consumable allowances are being reviewed. Intermediate level maintenance spare part requirements were adjusted in April 1996 to reflect the increase in aircraft from 12 to 36 due to the addition of two squadrons. The Commander of the Atlantic Fleet concurs with the course of actions.

**Audit Response.** The actions described are considered responsive and should support the operational realignment at NAS Atlanta. We request that the Navy provide the completion dates for the proposed action.

---

## **Finding E. Distribution of Countermeasures Receiving Sets**

Naval Air Reserve Force did not receive any of the initial 90 countermeasures receiving sets (countermeasures sets), valued at approximately \$31.5 million, needed to effectively perform its mission. Redistributions have occurred, but 16 sets remain to be delivered. Initial non-receipt occurred because Active Type Commanders received more countermeasure sets than those established in the Acquisition Strategy Report that conformed with the Congressional Conference Report for FY 1993 that established the Reserve funding level. In accordance with a March 1994 agreement, NAVAIR was to deliver 30 sets and has provided a total of 8. As a result, the Naval Air Reserve Force Strike Fighter squadrons did not have electronic warfare equipment for threat warning and countermeasures for the crisis response mission.

### **Responsibility for Requirements and Acquisition**

The SECNAVINST [Secretary of the Navy Instruction] 5400.15A, "Department of the Navy Research, Development and Acquisition, and Associated Life Cycle Management Responsibilities," May 26, 1995, states:

- o The Chief of Naval Operations is responsible for determining requirements and establishing the priority of those requirements. In addition, he serves as a principal advisor to the Secretary of the Navy in the allocation of resources to meet program requirements in the programming and budget process.

- o The Assistant Secretary of the Navy (Research, Development and Acquisition) shall:

- o serve as the Navy Acquisition Executive with responsibility for supervising the performance of the DoD Acquisition System within the Navy;

- o be responsible for procurement of systems satisfying requirements as efficiently and economically as possible; and

- o supervise the System Command (NAVAIR) Commanders in research, development, and acquisition matters.

## Requirements and Distributions

**Elements and Functions of Countermeasures Sets.** A countermeasures set consists of six unique weapon-replaceable assemblies: the computer, the quadrant receiver (four per aircraft), the control indicator, the azimuth indicator, the antenna receiver, and the special receiver. The countermeasures sets, with modifications, will provide an advanced computer and quadrant receiver to correct all deficiencies disclosed during operational evaluations. These countermeasures sets provide A-6E/F, AV-8B, F/A-18, and F-14A/D Navy aircraft with an advanced airborne radar/missile warning and control system.

**Procurement of Countermeasures Sets.** The Acquisition Strategy Report dated January 15, 1993, that the Assistant Secretary of the Navy (Research, Development and Acquisition) approved, shows that 266 countermeasures sets were to be procured and 90 were to be distributed to the Naval Air Reserve Force for FY 1993. The end users provided input for the development of the number of countermeasures sets needed. Based on this input, the Air Warfare Division established requirements for the countermeasures sets. The requirement should have provided Naval Air Reserve Force F/A-18 Strike Fighter aircraft with 90 sets to comply with Congressional Conference Report, "Making Appropriations for the DoD for the Fiscal Years Ending September 30, 1993, and Other Purposes." The remaining 176 countermeasures sets were for Commanders, Naval Air Force, Atlantic and Pacific Fleets (58); for program managers in NAVAIR offices PMA-272 and PMA-234 (107); and for trainers (11) as indicated in the Acquisition Strategy Report. The approximate unit cost for each countermeasures set is \$350,000.

**Special Receivers Distribution.** We analyzed four of the six countermeasures set assemblies and determined that the Naval Air Reserve Force did not receive any of the initially procured four assemblies. Table 5 presents the planned requirement and actual distribution for the special receivers component. The special receiver presentation is representative of the assemblies we reviewed.

**Table 5. Requirement and Distribution of Special Receivers Component**

	<u>Planned Requirement</u>	<u>Actual Distribution</u>	<u>(Under) Difference</u>
Fleet	58	265	207
Reserves	90	0	(90)
Program Managers	107	1	(106)
Trainer	<u>11</u>	<u>0</u>	<u>(11)</u>
<b>Total</b>	<b>266</b>	<b>266</b>	<b>0</b>

**Distribution Documentation.** The Program Manager for Acquisition for Advanced Tactical Aircraft Protection Systems (PMA 272) stated that the sets were distributed to the fleet instead of the Naval Air Reserve Force and other

## Finding E. Distribution of Countermeasures Receiving Sets

---

users because "Fleet need necessitated shipment of all assets to Type Commanders." However, documentation was not available to support this decision. Also, no documentation supported the actual NAVAIR distribution even though it was responsible for informing the contractor of delivery quantities and shipping locations. As a result, the Navy was unable to demonstrate the discrepancy between the planned and actual distribution and was unable to identify the location of the countermeasures sets for redistribution.

Cognizant personnel from the Air Warfare Division stated they did not know NAVAIR had not distributed countermeasures sets based on their established priorities. Air Warfare Division was made aware of the deliveries after the Naval Air Reserve Force explained it did not receive its correct allocation.

**Redistribution Plan.** To alleviate the mis-allocation, a fair share redistribution plan was established in March 1994. This plan scheduled the transfer of 30 countermeasures sets each to the CNARF from the type commanders (Active) and the NAVAIR over 3 years. That agreement has been fulfilled except for the NAVAIR distribution. The NAVAIR was to provide 30 sets by the end of FY 1995 according to the March 1994 agreement and has delivered 8 sets. NAVAIR believes that giving up the additional countermeasures sets will adversely affect its test and evaluation program. The original total procurement was for 1,209 countermeasure sets with the type commanders (Active) receiving more than 1,100. NAVAIR received only about 50 for test and evaluation purposes, but was scheduled to provide 30 to the Reserves, as was each of the type commanders.

The NAVAIR 272 is responsible for the systems in the test and evaluation community. The NAVAIR subsequently requested that type commanders (Active) reconsider the fair share distribution plan of countermeasures sets because the test and evaluation community could not locate enough systems to transfer to the Reserves. Consequently, the Navy performed a worldwide screening of all weapon-replaceable assemblies on hand as of May 17, 1995, to determine the location of the systems. After the worldwide screen of the countermeasures sets, the type commanders met but did not alter the fair share distribution plan of countermeasures receiving sets to the Naval Air Reserve Force. During April 1996, CNARF personnel incorrectly confirmed to our office that no countermeasures sets had been delivered for Reserve F/A-18 aircraft. Subsequent contacts with CNARF personnel, about countermeasures set deliveries, indicated that the only shortage occurring, in accordance with the March 1994 agreement, was with NAVAIR for 22 sets. The CNARF's total current requirement is for 84 sets, resulting in a shortage of 16 sets due from NAVAIR.

## **Conclusion**

Reserve F/A-18 Strike Fighter Squadrons did not have all the necessary electronic warfare equipment to provide them threat warning and countermeasures capability for the crisis response mission. In a wartime scenario, the lack of these sets could jeopardize the safety of aircraft due to the inability to identify threats and take appropriate countermeasures. The Naval Air Reserve Force should receive its fair share of countermeasures sets. Distribution of countermeasures sets should be in accordance with established priorities, unless reprioritization is documented by appropriate authorities.

## **Recommendation, Management Comments, and Audit Response**

**Revised Recommendation.** As a result of management comments, we revised the finding text and recommendation. At the end of FY 1996, the Reserves had not received 22 countermeasures sets instead of the 90 we initially reported. The difference is the result of NAVAIR providing 8 sets, and the two Active Fleets providing 60 additional total sets. As shown in the Navy response, CNARF's current requirement are 84 sets rather than the March 1994 established amount of 90 resulting in a shortage of 16 sets. In addition, the shortage, according to the March 1994 agreement, is due to NAVAIR not providing countermeasures sets because of potential shortages in the test and evaluation community.

**E. We recommend that Naval Air Systems Command provide the 16 countermeasures sets due to the Reserves or obtain relief from the Chief of Naval Operations.**

**Management Comments.** The Navy did not concur that the Reserves had received none of the countermeasures sets. The Navy stated that 44 complete sets had been provided and an additional 24 were scheduled to be provided in FY 1996. As of April 1996, 38 sets had been provided to the Reserves. The Navy Test and Evaluation community stated that it has about 50 sets and to give up 30 sets would halt testing and development. The Navy said that the recommendation was unclear because it did not specify whether the original redistribution plan or a revised one was to be established. The current Reserves requirement is 84 countermeasures sets even though the March 1994 agreement called for 90 sets. The Atlantic and Pacific Fleets were scheduled to fulfill the last of their FY 1996 requirements by September 30, 1996.

**Audit Response.** In response to this final report, the Navy needs to explain the disposition of the 16 countermeasures sets and provide an estimated completion date for the explained action. The Navy is correct that the Reserves were scheduled to be short 22 countermeasures sets at the end of FY 1996. The current Reserve requirement is 16 countermeasures sets. We confirmed that by

## **Finding E. Distribution of Countermeasures Receiving Sets**

---

October 1996 the Reserves had received a total of 68 countermeasures sets. The Atlantic and Pacific Fleets had delivered 30 sets each, and Naval Air Systems Command had provided 8 of its required 30.



## **Part II - Additional Information**

---

## Appendix A. Scope and Methodology

### Scope

We evaluated the supportability planning process and assessed the effectiveness of planning for training, personnel, manpower, support equipment, equipment, and spare parts in support of P-3C, C-130T, and F/A-18 aircraft at Naval Air Reserve Force Squadrons. We visited three (VP 64, 66, and 94) out of nine P-3C, two (VR 53 and 55) out of four C-130T, and two (VFA 203 and 204) out of four F/A-18 squadrons. The aircraft reviewed were selected because receipt of the aircraft in the Reserve Squadrons required a major conversion for the squadron or for a new squadron to be established. We also considered input from Naval Air Reserve Force personnel concerning squadrons that were having problems. The P-3C squadrons were converting from P-3B aircraft. One C-130T Squadron was converting from C-9B aircraft and the other was a newly established squadron. The F/A-18 Squadrons had completed their conversion from F-4 aircraft several years earlier.

### Methodology

**Audit Period, Standards, and Locations.** We conducted this economy and efficiency audit from November 1994 through November 1995 and continued to obtain documentation that effected the audit through April 1996. We performed the audit in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the IG, DoD, and included tests of management controls considered necessary. We visited or contacted individuals within the Department of Defense. Further details are available on request.

**Use of Computer-Processed Data.** We relied on computer-processed data from the Navy Support Equipment Resources Management Information System, the Navy Inventory Control Point Network, and the NAS New Orleans and NAS Oceana F/A-18 inter-intermediate maintenance activity data bases. We did not assess the reliability of the data. However, the Navy has determined the data to be accurate for its use; therefore, we included the data for our use. For example, the data supporting critical support equipment and repairable spares in Finding D was based on data provided by CNARF personnel.

We also relied on computer-processed data in the Total Force Manpower Management System. We assessed the reliability of the data and found it to be adequate for our purpose.

## Management Control Program

DoD Directive 5010.38 "Internal Management Control Program,\*" April 14, 1987, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

**Scope of Review of Management Control Program.** We reviewed the adequacy of the Naval Reserve Force management controls over planning for aircraft procurements and conversions. Specifically, we reviewed Naval Reserve Force management controls over planning for training, personnel, manpower, and equipment in support of selected aircraft acquisitions and conversions. We also reviewed the results of any self-evaluation of the management controls.

**Adequacy of Management Controls.** We identified material management control weaknesses for the Naval Reserve Force as defined by DoD Directive 5010.38. Naval Air Reserve Force management controls planning was not adequate to ensure that the Reserve air squadrons were adequately equipped, trained, and manned to perform their wartime missions. Implementing Recommendations A.1., A.2., and B. will improve Naval Reserve Force training and staffing. Implementing Recommendations D.1. and D.2. will provide necessary support equipment and spares for the aircraft we reviewed. A copy of the report will be provided to the senior official responsible for management controls in the Office of the Chief of Naval Operations.

**Adequacy of Management's Self-Evaluation.** Naval Reserve Force officials identified the logistics support mobilization plan, the spare parts, and the Reserve Standard Training and Readiness Support System as assessable units and correctly identified the associated risk as either high or medium. Naval Reserve Force officials identified and implemented procedures to correct the weaknesses in these areas. However, the corrective actions that Naval Reserve Force Command implemented did not correct the material weakness identified by the audit because the assessment questions were not specific enough to identify the material weaknesses we identified at the squadron level.

---

\*DoD Directive 5010.38 has been revised as "Management Control Program," August 26, 1996. We performed the audit under the April 1987 version of the directive.

---

## **Appendix B. Prior Audits and Other Reviews**

The IG, DoD, performed three Air Reserve audits and one Army audit with issues pertaining to this audit, and the Inspector General, Department of the Navy, issued a letter with issues pertaining to this audit as listed below.

### **Inspector General, Department of Defense**

IG, DoD, Audit Report No. 95-243, "Planning for Conversion of Air National Guard and Air Force Reserve Aircraft," June 21, 1995, showed that units of the Air National Guard and Air Force Reserve were not adequately equipped and trained for conversion to F-16 and KC-135R aircraft. Consequently, the ability of these units to maintain readiness in peacetime and mobilize in wartime will be adversely affected. The report recommended that the Air National Guard and Air Force Reserve establish procedures and provide oversight for aircraft conversions to ensure that units converting to other aircraft will be adequately equipped and trained. The report also recommended that a lessons-learned data base be maintained for aircraft conversions. The Commander, Air Force Reserve, who responded for both the Air National Guard and the Air Force Reserve, agreed with the finding and recommendations relating to certain aspects of training and the lessons-learned data base and stated that both the Air National Guard and the Air Force Reserve were properly trained. He nonconcurrent with recommendations relating to oversight and stated current programs ensure units converting to other aircraft were properly equipped and trained. To provide oversight in the rapidly changing force structure, the Air Force has developed an additional information system to resolve the issue. A training guide to ensure training standards are met is to be issued March 1997.

IG, DoD, Audit Report No. 95-171, "Maintenance Support Equipment for Naval and Marine Corps Air Reserves' F/A-18 Aircraft," April 12, 1995, stated that the Naval Air Systems Command had not adequately planned to equip Naval Air Stations New Orleans and Dallas with maintenance support equipment for intermediate-level maintenance of Air Reserves' F/A-18 aircraft. Consequently, the Naval and Marine Corps Air Reserves' maintenance technicians were not effectively used and the readiness of the F/A-18 squadrons was impaired. The report recommended that the Chief of Naval Operations make excess maintenance support equipment available to the Naval and Marine Corps Air Reserves' F/A-18 intermediate-level maintenance facilities to facilitate the equipping of the facilities and modify Navy policy for distribution of support equipment. The Navy agreed with the findings and recommendations. The Navy will have bi-annual Type Commander meetings, improve communication with the Reserve equipment manager, and modify Chief of Naval Operations Instruction 4423.3C.

IG, DoD, Audit Report No. 93-065, "Acquisition of the UH-60 Black Hawk Helicopter," March 9, 1993, showed that the maintenance personnel were only

available for an average of 3 hours per day in their aircraft maintenance occupational specialty. The balance of the workday was spent on military duties, such as details, formations, and physical fitness. The report had one recommendation relating to our current audit that recommended the Army Chief of Staff increase the time that the Black Hawk maintenance personnel are available for duty in their maintenance occupational specialty and limit the time that maintenance personnel can be assigned to other functions or tasks. The Chief, Aviation Division, Office of the Army Deputy Chief of Staff for Operations and Plans, nonconcurred with the recommendation. He stated that maintenance personnel availability is a command-management issue. Because the Army had taken significant action to improve operational readiness, the recommended actions were considered complete.

IG, DoD, Audit Report No. 92-116, "Naval Reserve Reinforcing and Sustaining Units," June 30, 1992, reported on the economy, efficiency, and effectiveness of the Navy's requirements for its Reserve Components. The audit showed that the management of training assigned to Naval Reserve Force reinforcing and sustaining units needed improvement. The effectiveness of training was diminished by volatility in mobilization billet assignments and by fragmented responsibility for training local Reservists who had no authorized billets in the local commuting area. Also, training support at Reserve Centers in locations remote from active Component Naval bases was not adequate and reports of training status were based on incomplete data. As a result, the adequacy of training in reinforcing and sustaining units could not be assured. The report recommended improving Naval training requirements for part-time Reservists. The Navy nonconcurred that cross-assignments should be eliminated or that each Reserve Center should develop a capability to train all assigned personnel in the skills required of their billets. The Navy agreed that the training status of augmenting part-time Reservists should be more widely reported to management levels. The Navy also agreed that internal controls over the training of cross-assigned personnel should be improved. The cross-assignments elimination issue was resolved by making unit commanders responsible for readiness and by establishing an overall effectiveness index to assess progress.

### **Inspector General, Department of the Navy**

Letter 5040 Serial 31/0602, "Report of Command Inspection NAVINSGEN (Navy Inspector General) Area Visit to New Orleans, Louisiana, 4 December - 11 December 1992," February 25, 1993, showed that F/A-18 intermediate-level maintenance personnel stationed at the NAS New Orleans were unable to perform F/A-18 intermediate-level aviation maintenance due to lack of support equipment. The Navy did not plan to acquire the maintenance support equipment at the time of the inspection. The report recommended that the Commander, NAVAIR, provide a plan of action and milestones for the expeditious establishment of an F/A-18 aircraft intermediate-level maintenance facility at the air station. Equipping NAS New Orleans began in FY 1994 and should be completed in the third quarter FY 1997. On December 1, 1995,

## **Appendix B. Prior Audits and Other Reviews**

---

representatives of NAVAIR and the IG, Department of the Navy, agreed to an alternative plan that would provide adequate intermediate avionics maintenance equipment.

---

## **Appendix C. Aircraft Description**

### **P-3C Aircraft**

The P-3C Aircraft is a land-based, long-range maritime surveillance system primarily designed for Anti-Surface and Anti-Submarine Warfare, Shipping Surveillance, and Search and Rescue. The aircraft crew consists of five officers and seven enlisted personnel. For FY 1995, the Naval Reserves allocation plan included \$1.2 million for P-3 cluster ranger spares, \$7.0 million for P-3 radar support equipment, and \$4.5 million for updating five P-3C aircraft with the P-3C update kits. The prime contractor for the aircraft is the Lockheed Aeronautical Systems Company. Patrol Squadrons VP 64, 66, and 94 each received eight aircraft during FY 1994.

### **F/A-18 Aircraft**

The F/A-18 Hornet is a one-pilot Navy and the Marine Corps strike and fighter plane. The Naval Air Reserve Force uses the A version of the F/A-18 for its missions. The aircraft is a high performance, mid-wing, carrier-suitable, tactical aircraft capable of night attack and powered by two 20,000-pound engines. The F/A-18 Hornet is equipped with upgraded avionics and weapon systems that provide versatile ordinance and air-to-air and air-to-ground weapons delivery. The prime contractor for the aircraft is the McDonnell Aircraft Company with Northrop Aviation providing the airframe and General Electric providing the engines. Strike Fighter Squadron (VFA) 204 received 12 aircraft during FY 1991 and Flight Composite Squadron (VFC) 12 received 12 aircraft during FY 1993.

### **C-130T Aircraft**

The C-130T Hercules provides rapid transportation of personnel or cargo for delivery by parachute or landing. Congress approved \$124.0 million in National Guard and Reserve Aircraft funding for the purchase of four C-130T Aircraft at a unit cost of \$31.5 million to the Naval Reserve Force for 1994. The C-130T Aircraft can be a tactical transport (carrying 92 ground troops or 64 paratroops and equipment) or converted for ambulance or aerial delivery missions (carrying 74 litters). A crew of five operates the C-130T aircraft, which can operate on short runways and landing strips. It provides emergency evacuation of personnel and key equipment, advance party reconnaissance, and special warfare operation capabilities. The aircraft is powered by four Allison

## **Appendix C. Aircraft Description**

---

T56-A-15 engines and four Hamilton Standard Blade Propellers. The prime contractor of the aircraft is the Lockheed Aeronautical Systems Company. General Motors Incorporated provides the engines and Hamilton Standard provides the propellers. Fleet Logistics Support Squadrons (VR) 53 and 55 each received four aircraft in FY 1993 and FY 1994, respectively.



## Appendix D. Non-Mission-Essential Courses

**Table D-1. General Navy Training**

<u>Title</u>	<u>Course Number</u>	<u>Reference</u>	<u>Hours</u>
Navy Rights and Responsibilities	GNT-000-0001	OPNAVINST 5354.1 Series COMNAVRESFORINST 5354.1 Series	4.0
Recreational, Athletic, and Home Safety	GNT-000-0006	OPNAVINST 5100.25	1.0
Drug and Alcohol Prevention	GNT-000-0018	OPNAVINST 5350.4 SECNAVINST 6100.5	1.0
Tobacco/Prevention/Cessation	GNT-000-0019	OPNAVINST 5700.13A OPNAVINST 6100.5	1.0
Physical Fitness and Sports	GNT-000-0021	OPNAVINST 6100.2 SECNAVINST 6100.5	1.0
Nutrition Education	GNT-000-0022	OPNAVINST 6100.2	1.0
Weight Control	GNT-000-0023	OPNAVINST 6100.2	1.0
Back Injury Prevention	GNT-000-0024	OPNAVINST 6100.2	1.0
High Blood Pressure Identification	GNT-000-0025	OPNAVINST 6100.5 DoD Directive 1010.10	1.0
Suicide Prevention	GNT-000-0027	SECNAVINST 6100.5 DoD Directive 1010.10	1.0
Personal Financial Management	GNT-000-0035	OPNAVINST 1740.5	1.0
Uniform Health Sciences	GNT-000-0048	None	1.0
Voting	L12-150-0NAF	None	<u>1.0</u>
<b>Total Hours</b>			<b>16.0</b>

## Appendix D. Non-Mission-Essential Courses

---

**Table D-2. Practical Training**

<u>Title</u>	<u>Course Number</u>	<u>Reference</u>	<u>Hours</u>
Educational Opportunities	A06-501-0010	A06-501-0010-1.6	1.0
Tools and Their Safe Use	A22-950-0002	A22-950-0002-1.22	1.0
AAA Driver Improvement Program	CNR-950-0001	R-950-0001	4.0
Respirator Program	L00-120-0006	NAMP	1.0
Toys and Home Play Equipment	L06-SAF-AADM	National Safety Council	1.0
Falls/Fire Alarms/Exits	L08-SAF-0ADM	Safety Lectures	1.0
Hazardous Weather	L09-SAF-0ADM	September 1994 Safety	1.0
Bathroom Hazards/Foul Weather	L10-SAF-ADMN	None	1.0
Recreational Swimming and Diving	L27-NSC-0220	National Safety Council Safety Bulletin No. 27	1.0
Sewing Machines, Fabrication, and Manufacturing	M01-P30-SEWG 8195 LG#	P30 PR CDP	1.0
DD Form 1348, MILSTRIP Preparations	R05-555-0003	R-555-0003-1.5	1.0
Naval Publications/Instruction/Descriptions/Purposes	R05-555-0003	R-555-0003-1.5	1.0
Think Ahead - Drive Defensively	S20-005-5100	S20-SAF-5100	1.0
Driving Under the Influence		FTS-830-0000-19.1	0.5
Take a Close Look at Close Calls	S23-005-5100	S23-SAF-5100	1.0
Screwdrivers - A Commonly Used and Abused Tool	S28-005-5100	ATS-602-2026-1.1	1.0
Does Wearing Personal Protective Equipment Pay Off?	S39-005-5100	S39-SAF-5100	1.0

## Appendix D. Non-Mission-Essential Courses

---

**Table D-2. Practical Training (Cont'd)**

<u>Title</u>	<u>Course Number</u>	<u>Reference</u>	<u>Hours</u>
Are You Heading for a Fall?	S55-005-5100	S55-005-5100	2.0
Avoiding Accidents	S61-005-5100	S61-SAF-5100	1.0
Vacation Safety Tips	S68-005-5100	S68-SAF-5100	1.0
Safety in the Home	S69-005-5100	S69-SAF-5100	1.0
Office Safety	S72-005-5100	S72-SAF-5100	1.0
Working Safely in the Office	S73-005-5100	S73-SAF-5100	0.5
Spotting Hazards	S76-005-5100	S76-SAF-5100	<u>1.0</u>
<b>Total Hours</b>			<b>27.0</b>

## Appendix E. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
A.1.a., A.1.b., A.2.	Program Results and Management Controls. Mission-essential courses will improve Reserve readiness. Periodic course evaluation will improve management controls over course content.	Nonmonetary.
B.	Compliance with Regulations or Laws and Management Controls. Adherence to current guidance will improve management control over recruitment goals. Full-time flight engineers will increase and improve squadron readiness.	Nonmonetary.
C.	Program Results. Establishes the proper squadron manpower to perform the simultaneous dual missions.	Nonmonetary.
D.1., D.2.a., D.2.b, D.2.c.	Program Results and Management Controls. Acquiring required support equipment and spares would improve C-130T and P-3C maintenance capability and squadron readiness. Management controls over budget flight-hour estimates will improve.	Nonmonetary.
D.3.a., D.3.b., D.4.a., D.4.b., D.4.c.	Compliance with Regulations or Laws. Adherence to procedures for establishing and maintaining F/A-18 repairable spare parts would improve squadron readiness.	Nonmonetary.
E.	Program Results. Provides the Navy Reserves with required systems and increases their readiness.	Nonmonetary.

---

## **Appendix F. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense for Acquisition and Technology  
Director, Defense Logistics Studies Information Exchange  
Under Secretary of Defense (Comptroller)  
Deputy Controller (Program/Budget)  
Assistant Secretary of Defense (Force Management Policy)  
Assistant Secretary of Defense (Reserve Affairs)  
Assistant to the Secretary of Defense (Public Affairs)  
Deputy Under Secretary of Defense (Logistics)

### **Department of the Army**

Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller)  
Management Control and Audit Liaison Branch  
Assistant Secretary of the Navy (Research, Development, and Acquisition)  
Commander in Chief, U.S. Atlantic Fleet  
Auditor General, Department of the Navy  
Director of Naval Reserve  
Commander, Naval Reserve Force  
Commander, Naval Air Reserve Force  
Deputy Chief of Naval Operations (Manpower and Personnel), Director of Total Force  
Programming/Manpower  
Commander, Navy Manpower Analysis Center  
Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessment),  
Air Warfare Division  
Director of Naval Training, Enlisted Policy Branch  
Deputy Chief of Staff for Manpower and Reserve Affairs (Marine Corps)  
Commander, Marine Reserve Force  
Commander, Naval Air Systems Command  
Commander, Naval Inventory Control Point - Philadelphia

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force

## **Defense Organizations**

Director, Defense Contract Audit Agency  
Director, Defense Logistics Agency  
Director, National Security Agency  
Inspector General, National Security Agency  
Inspector General, Defense Intelligence Agency

## **Non-Defense Federal Organizations and Individuals**

Office of Management and Budget, National Security Division  
Technical Information Center, National Security and International Affairs Division,  
General Accounting Office

Chairman and ranking minority member of each of the following congressional  
committees and subcommittees:

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on National Security, Committee on Appropriations  
House Committee on National Security  
House Committee on Government Reform and Oversight  
House Subcommittee on National Security, International Affairs, and Criminal  
Justice, Committee on Government Reform and Oversight

## **Part III - Management Comments**

# Department of the Navy Comments



DEPARTMENT OF THE NAVY  
OFFICE OF THE ASSISTANT SECRETARY  
RESEARCH, DEVELOPMENT AND ACQUISITION  
1000 NAVY PENTAGON  
WASHINGTON DC 20350-1000

AUG 29 1996

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE ASSISTANT INSPECTOR  
GENERAL FOR AUDITING

Subj: DRAFT REPORT ON THE AUDIT OF PROVIDING AIRCRAFT TO THE  
NAVAL AIR RESERVE FORCE (PROJECT NO. 4AG-0014.02)

Ref: (a) DODIG Memo of 26 June 96

Encl: (1) DON Response to Draft Audit Report

I am responding to the draft audit report forwarded by reference (a) which regards the providing of aircraft to Reserve Components.

The Department of the Navy response is provided in enclosure (1). We generally agree with the draft report findings and concur with the recommendations with a few exceptions. As noted in the enclosed comments, there are several actions that have been taken since the report was issued that address the recommendations. Also, one recommendation is unclear as to whether the original or a modified plan should be implemented.

A handwritten signature in dark ink, appearing to read "M. P. Sullivan".

M. P. Sullivan  
Rear Admiral, SC, USN  
Acting Principal Deputy

Copy to:  
NAVINSGEN  
FMO-31  
COMNAVAIRRESFOR  
CINCLANTFLT IG



Department of the Navy Response  
to  
DODIG Draft Report of June 26, 1996  
on  
Providing Aircraft to The Naval Air Reserve Force  
Project No. 4AG-0014.02

Finding A.

Part-time C-130T and P-3C Reservists spent about 20 percent of their available annual hours (272) attending non-mission-essential courses. This condition occurred because CNARF did not have adequate procedures to periodically evaluate the relevance of all training courses, especially for part-time Reservists. As a result, these Reservists had less time to take mission-essential courses and, thus, were not fully qualified to perform their operational tasks, including mobilization assignments.

Recommendation A.1.a.

We recommend that the Commander, Naval Air Reserve Force evaluate the appropriateness of training courses for C-130T and P-3C part-time Reservists.

a. For General Training courses that do not directly contribute to the squadron's mission, request a waiver from appropriate authority.

DON Response A.1.a.:

Partially concur. General Navy Training courses are required for all Navy personnel. To request a waiver for training that is required for all Navy would be contrary to the Navy's Total Force concept. The importance of this training for Reservists is that all Navy personnel need this for mobilization. However, the new OPNAVINST 4790.2F which directs General Navy Training changes the training cycle from every two years to once every tour. This will greatly reduce the amount of non-mission-essential training that Reservists will have to receive on a recurring basis.

Recommendation A.1.b.

We recommend that the Commander, Naval Air Reserve Force evaluate the appropriateness of training courses for C-130T and P-3C part-time Reservists.

b. For those courses classified as Practical Navy Training, eliminate courses that do not directly contribute to the squadron's mission.

DON Response A.1,b.:

Concur, the Navy will take a more in-depth look at the appropriateness of these training courses. A majority of the courses listed in the audit as Practical Navy Training are

different lectures which fall under the safety umbrella. A variety of the safety training topics are required by OPNAVINST 5100.23D (OSHA training requirements) and OPNAVINST 4790.1F on a monthly basis. In addition, local commanders can conduct additional training on topics they deem most beneficial to enhance the safety awareness and therefore the operational readiness of their unit. CNARF currently requires units to have an annual one day safety standdown to conduct safety related Practical Navy Training. Read and initial boards may be used to accomplish most non-safety related Practical Navy Training vice formal classroom training.

Recommendation A.2.

We recommend the Commander, Naval Air Reserve Force assess the relevance of squadron-level training through periodic inspections.

DON Response A.2.:

Concur. The cognizant Airwing staff conducts periodic inspections of the C-130T and P-3C squadrons within their wing. During these inspections, squadron level training is reviewed and evaluated for currency and effectiveness specific to each type/mode/series aircraft. The Wing forwards any training change recommendations to COMNAVAIRESFOR for approval.

Finding B.

C-130T and P-3C Reserve Aircraft Squadrons we reviewed had shortages of qualified flight engineers of 27 (56 percent) and 39 (46 percent), respectively. The Commander, Naval Reserve Force, authorized too many part-time flight engineer billets, thereby limiting the number of available full-time billets. As a result, the readiness rating of the C-130T and P-3C Reserve Aircraft Squadrons was impaired by their inability to assemble complete flight crews.

Recommendation B:

We recommend the Commander, Naval Reserve Force, modify flight engineer authorizations and recruit to reflect the part-time and full-time distribution required by the Bureau of Naval Personnel Manual NAVPERS 18068F, Volume II.

DON Response:

Partially concur. This has been a persistent problem long before this audit team reported their findings. Due to the lengthy training period associated with FE qualifications, very few SELRES FE's are those recruited directly from the fleet. The short of it is that few SELRES FE billets are filled. This indeed places a tremendous strain on TAR FE's who have to pickup the slack.

Recognizing this problem, CNARF has recommended to convert SELRES billets for Full Time Support requirements. Basically more TAR FE billets. Once adjudicated, this will increase TAR FE billets in each VP squadron by three (3) and the C-130 squadrons by recommending realignment of aircrew billets. CNARF recommended a change in the TAR FE, Load Masters (LM), and Flight Attendants (FA) from 10 each to a more realistic mix of 12 FE's, 12 LM's and 6 FA's. CNARF also recommended an increase in TAR maintenance billets, convert 10 SELRES billets to TAR, to relieve the addition manhour requirements placed on aircrew personnel in support of aircraft maintenance.

The realignment of C-130 aircrew billets has been approved and forwarded to NAVMAC and BUPERS for incorporation into the respective Activity Manpower Documents of each C-130 squadron. Recommendations to increase TAR flight engineer manning is currently in work at CNARF Manpower N14. Once complete, these changes will be forwarded to NAVMAC and BUPERS.

Finding C.

Naval Air Reserve Force F/A-18 and F-14 Squadrons may not have sufficient manpower for both missions of crisis response and fleet contributory support for adversary training. Disestablishing two Active and five Reserve squadrons by the Chief of Naval Operations for FY 1994 increased the amount of adversary training the remaining five Reserve squadrons provided. The Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessment), Air Warfare Division (Air Warfare Division), has not updated the Required Operational Capability (ROC)/Projected Operational Environment (POE) statements so that manpower requirements could be recalculated to reflect the above changes. Consequently, readiness has been affected for the crisis response mission and the ability to fully perform all necessary adversary training may be affected.

Recommendation C:

We recommend that the Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessment), Air Warfare Division, update the Required Operational Capability/Projected Operational Environment statements to reflect simultaneous dual missions and the resulting effects on the Reserve F/A-18 and F-14 squadrons and provide the update to the Naval Manpower and Analysis Center.

DON Response:

Concur. Reserve F-14 ROC/POE was updated 12 January 1996. As required by OPNAVINST C3501.2J, this ROC/POE will be reviewed again no later than January 1998. The Reserve F/A-18 ROC/POE is currently being rewritten to comply with the new instruction and will include the dual mission requirements as well as updated fleet support mission capabilities. Estimated completion date is

August 1996. Both the revised Reserve F-14 ROC/POE and the draft Reserve F/A-18 ROC/POE include increased manpower required to support the adversary mission.

Finding D.

Naval Reserve P-3C squadrons lacked critical support equipment valued at \$0.7 million, and C-130T and F/A-18 squadrons lacked critical spare parts valued at \$3.5 million. These shortages occurred because:

- o Naval Air Systems Command (NAVAIR) did not distribute support equipment on a fair bases to P-3C squadrons
  - o Air Warfare Division did not develop adequate budgets to provide spare parts for C-130T squadrons through the flight hour rates.
  - o NAVAIR and Air Force Material Command did not adequately coordinate spare part requirements to support the C-130T.
  - o CNARF and Commander in Chief, U.S. Atlantic Fleet, did not submit Allowance Change Requests that provided adequate spares inventory to repair F/A-18 aircraft due to insufficient transportation time.
- Consequently, Naval Reserve C-130T, P-3C, and F/A-18 squadron aircraft were inoperable for extended periods. Base on the results of our audit, Navy personnel took significant action to correct C-130T support equipment shortages valued at \$5.6 million.

DON Comments:

Concur with findings on critical support equipment, repairable spare parts, support equipment redistribution, flight hour budgets and Air Force support regarding the C-130T aircraft.

DON Specific Comments:

Page 18, Paragraph 2.

"Naval Air System Command (NAVAIR) did not distribute support equipment on a fair share basis to P-3C squadrons." Partially concur.

Table 3, page 20.

This table lists a total of 10 support equipment (SE) items which were deficit at Naval Air Station (NAS) Willow Grove, Naval Air Facility (NAF) Washington, and NAS New Orleans. The information was taken from a 13 October 1995 memorandum from Chief of Naval Air Reserve Force (CNARF). The specifics of the memorandum with a current status follows:

Items 1: AN/ASW-31A Component Test Set, 01-223-3118 Deficit at NAF Washington and NAS Willow Grove

Status: Resolved. NAVAIR and NAVAIRWARCEN (NAWC) AD Lakehurst have recognized the requirement for additional SE for

the AN/ASW-31. Numerous attempts to procure this item have been unsuccessful due to parts obsolescence problems. In March 1995, NAWC AD Lakehurst issued a contract for Test Program Sets to replace this item. Production deliveries are scheduled for May 1997. This procurement, funded by PMA-260 at approximately \$7 million, will satisfy the requirements for AN/ASW-31 support.

Item #2: Bench Harness, 00-113-999, two items in rework, Deficit at NAF Washington and NAS Willow Grove

Status: Resolved. CNARF advised that the two item were returned from rework. Deficit satisfied.

Item #3: Radio Test Set, 00-432-7729, Deficit at NAF Washington

Status: Can be Resolved. Item required for I-level repair of the AN/ARC-161 radio. Deficit still exists at NAF Washington. Fleet wide excess of 1 test set should satisfy requirement. CNARF should follow established process for excess SE redistribution.

Item #4: Amplifier, 01-072-5720, Deficit at NAF Washington and NAS Willow Grove

Status: Will be resolved when VP-68 decommissions. Item required for I-level repair of the AN/ARC-161 radio. Deficit satisfied for NAS Willow Grove, still deficit at NAF Washington. Fleet wide deficit of 4 items.

Item #5: Data Loop Test Set, 01-222-7787, Deficit at NAF Washington, NAS New Orleans, and NAS Willow Grove

Status: This item is a candidate from the annual SE prioritization conference and is planned for procurement to satisfy the deficits. SE controlling authorities, AIRLANT, AIRPAC, RESFOR, etc., identified quantity requirement to procure 6 units during the 1996 SE conference.

In summary, plans for addressing the deficits of items 1 and 5 were in place but not reflected in the data used for the report. Item 2 has been resolved. Item 3 can be resolved by CNARF requesting redistribution of excess SE. Item 4 is a fleet wide issue. Additionally, Items 4 and 5 are an issue at NAF Washington where VP-68 is decommissioning.

Recommendation D.1:

We recommend that the Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessment), Air Warfare Division, develop realistic C-130T aircraft flight hour requirements upon which to base adequate consumable and repairable parts to support the C-130T aircraft.

DON Response D.1:

Concur regarding flight hour requirements. POM 96 and PR 97 budgeted the C-130T with 11,065 flight hours per year in order to more adequately meet CINC demands. POM 98 has budgeted the C-130T with 11,065 flight hours per year through FY-03.

The Weapons Planning Document dated 29 November 1995 has been

updated to reflect actual requirements. Utilization rates were increased by 54 percent. The Naval Inventory Control Point (NAVICP) has been notified of the change required in the flight hour planning factors in computing spares requirements.

Recommendation D.2:

We recommend that the Commander, Naval Air Systems Command:

- a. Identify excess inventory that can be used to reduce P-3C and C-130T shortages.
- b. Provide fair share distributions of P-3C support equipment to Naval Air Reserve Force maintenance facilities.
- c. Develop a memorandum of agreement with the Air Force Material Command for C-130T spare parts support. As a minimum, such an agreement should provide for procurement and repair priorities between the Services, configuration control information, supply status information, and points of contact with periodic meetings.

DON Response D.2.a.:

Concur. Specific processes are in place to ensure that procurements do not exceed requirements. To validate the status of these processes, a review of all known C-130 support equipment items listed as excess in 1996 was conducted. None of the excess items were ordered under the C-130T procurement. The "test set interrogator" listed as an anecdotal example of a redistribution error was not ordered because NAVICP identified the excess. The Type Commander (TYCOM) has documented his satisfaction with SE procurements in attachment (A). Excess SE is being redistributed in accordance with established policy.

In the past, NAVAIR, NAWC Lakehurst and CNARF specifically planned for and implemented SE procurements required as a result of the introduction of the P-3C aircraft for VP-65 at NAS Pt. Mugu, VP-68 at NAF Washington, VP-69 at NAS Whidbey Island, and VP-62 at NAS South Weymouth. Since that time, additional P-3C aircraft were transitioned to the reserves. No additional SE procurements were planned as it was believed that squadron decommissioning and base closures would continue to provide excess SE that would be available for redistribution. The report describes the responsibilities of the NAVAIR Aviation program manager for SE as the primary controlling authority and lists the secondary controlling authorities as AIRLANT, AIRPAC, and RESFOR. The effectiveness of the process that is in place for these activities to identify and redistribute excess SE is evident in the relatively small number of items listed in the report.

DON Response D.2.b.:

Concur. As described in Specific Comments, Table 3, plans for providing items 1 and 5 are in process; item 2 has been completed; and items 3 and 4 will be resolved when VP-68 at NAF Washington decommissions.

DON Response D.2.c.:

Partially concur to develop a memorandum of agreement with the Air Force Material Command for C-130T spare parts support. Concur to conduct periodic meeting to discuss procurement and logistic issues. Do not concur to establish a Memorandum of Understanding

Recommendation D.3:

We recommend that the Commander, Naval Air Reserve Force:

- a. Submit Allowance Change Requests for additional spare part transportation time to support the Reserve F/A-18 squadron's mission at Naval Air Station New Orleans.
- b. Develop spare parts requirements for Naval Air Station Atlanta to support operational realignment.

DON Response D.3.a:

Do not concur. Spare parts allowances at NAS JRB New Orleans are set using the maximum turn-around-time (TAT) allowed of 20 days. ACRs are submitted by NAS JRB New Orleans personnel based upon increased demand where justified. Furthermore, at the time of this study full intermediate level maintenance capability was not developed at NAS JRB New Orleans necessitating frequent shipment of parts to NAS Cecil Field for repair and return. Full intermediate maintenance capability is established at NAS JRB New Orleans now and the number of components shipped to NAS Cecil Field has decreased significantly.

DON Response D.3.b.:

Concur. Spare parts requirements have been developed for NAS Atlanta based on the concept that organizational level maintenance only will be performed at NAS JRB Atlanta, and intermediate level maintenance will be performed by NAS JRB New Orleans. Navy Inventory Control Point (NAVICP) Philadelphia has approved and funded a \$2.6 million Splinter SHORCAL for NAS Atlanta to support organizational level maintenance. Consumable allowance recommendations have been made and are being reviewed at NAS Atlanta. Spare parts to support I level repair for the F/A-18 at NAS JRB New Orleans were adjusted in April 1996 based on an aircraft population of 36 vice the 12 currently located aboard NAS JRB New Orleans. The increase will support F/A-18 operations at NAS Atlanta and NAS JRB New Orleans.

Recommendation D.4.:

We recommend that the Commander in Chief, U.S. Atlantic Fleet:

- a. Submit Allowance Change Requests for additional spare part transportation time to support the Reserve F/A-18 squadron's mission at Naval Air Station Oceana.
- b. Redistribute excess spare parts from Naval Air Station Cecil Field to locations with shortages.

## Department of the Navy Comments

Final Report  
Reference

c. Provide the required F/A-18 spare parts to Naval Air Station Atlanta that support its operational realignment based on requirements established in Recommendation D.3.b.

### DON Response D.4.a.

Concur with submitting Allowance Change Requests for additional spare part transportation time to support the Reserve F/A-18 squadron's mission at Naval Air Station Oceana.

### DON Response D.4.b.

Concur with redistributing excess spare parts for Naval Air Station Cecil Field to locations with shortages.

### DON Response D.4.c.

Liaison with COMNAVAIRESFOR states that spare parts requirements have been developed for NAS Atlanta based on the concept that organizational level maintenance only will be performed at NAS JRB Atlanta, and intermediate level maintenance will be performed by NAS JRB New Orleans. Navy Inventory Control Point (NAVICP) Philadelphia has approved and funded a \$2.6 million Splinter SHORCAL for NAS Atlanta to support organizational level maintenance. Consumable allowance recommendations have been made and are being reviewed at NAS Atlanta. Spare parts to support I level repair for the F/A-18 at NAS JRB New Orleans were adjusted in April 1996 based on an aircraft population of 36 vice the 12 currently located aboard NAS JRB New Orleans. The increase will support F/A-18 operations at NAS Atlanta and NAS JRB New Orleans. CINCLANTFLT concurs with this course of action.

### Finding E:

Naval Air Reserve Force did not receive any of the 90 countermeasures receiving sets (countermeasures sets), valued at approximately \$31.5 million, needed to effectively perform its mission. Non-receipt occurred because Active Type Commanders received more countermeasure sets than those established in the Acquisition Strategy Report that conformed with the Congressional Conference Report for FY 1993 that established the Reserve funding level. In addition, NAVAIR, did not have a documented policy requiring distribution of systems in accordance with established requirements and the Deputy Chief of Naval Operations (Resource, Warfare Requirements, and Assessments) was not notified that distributions deviated from those requirements. As a result, the Naval Reserve Force Strike Fighter squadrons did not have electronic warfare equipment for threat warning and countermeasures for the crisis response mission.

### DON Specific Comments:

Paragraph 1, page 29 Do not concur with the statement that the Reserves had received none of the 90 countermeasures sets that

Revised 30

Revised 30



they were due. It is true that they did not receive them the time they were procured. However, in 1994, they were provided 75 computers up front by PMA-272; and since that time have been provided with additional weapons-replacement assemblies (WRAs) to make up 44 complete sets with at least 24 more scheduled for delivery this fiscal year.

"Elements and Functions of Countermeasure Sets," page 30 "A countermeasure set consists of seven unique weapon-replaceable assemblies; the high-band antenna;..." The high-band antenna is not part of the ALR-67 system but is instead part of the aircraft inventory. As such, it is not a WRA that is procured with an ALR-67 system and consequently would not be provided with a delivered system. This error is made again in paragraph 3, same page.

Revised 31

"Procurement of Countermeasures Sets," page 30, 1st sentence  
"The Acquisition Strategy Report...., shows that 226 countermeasure sets were to be procured for FY 1993." The number is 266.

Revised 31

"Procurement of Countermeasure Sets," page 30, 6th sentence  
"The remaining 176 countermeasure sets were for Commanders, naval Air Force,...for program managers (107);..." We are unaware of the source of that distribution.

Revised 31

"Redistribution Plan," page 31, paragraph 2, 2nd sentence  
"The PMA-272...could not locate enough systems to transfer to the Reserve." This statement is slightly misleading. In reality, we could locate all of our systems, but having only approximately 50 systems in the entire T&E community, it was nearly impossible to transfer 30 of those without bringing testing and development to a halt.

32

"Redistribution Plan," page 31, page 32, 2nd sentence "During April 1996, CNARF personnel confirmed that no countermeasures sets had been delivered for Reserve F/A-18 aircraft." As of April 1996 the Reserve had received 38 systems.

Revised 32

"Recommendation for Corrective Action," page 32 It is unclear as to whether the recommendation is to follow the original redistribution plan where the T&E community and the two TYCOMS provided 30 systems each or a revised distribution plan.

Revised and  
redirected 33

Recommendation E.

We recommend that the Chief of Naval Operations direct the Commanders, Naval Air Force, Atlantic and Pacific Fleets, to reallocate the 90 countermeasures receiving sets to the Naval Reserve Air Force in accordance with the March 1994 redistribution plan.

Revised and  
redirected 33

## Department of the Navy Comments

---

### DON Response:

Recommendation is unclear. COMNAVAIRLANT and COMNAVAIRPAC have honored the Mar 94 agreement and in some cases delivered a system 6 months early. Although the Mar 94 agreement called for the transfer of 90 sets, the current CNARF requirement is 84. If COMNAVAIRPAC and COMNAVAIRLANT meet their combined commitment of 60 sets by Sept 96, then COMNAVAIRSYSCOM needs to only provide 16 in addition to the 8 sets already provided.



DEPARTMENT OF THE NAVY  
COMMANDER NAVAL AIR RESERVE FORCE  
NEW ORLEANS, LOUISIANA 70146-5208

IN ARMY REFER TO

25 Apr 96

MEMORANDUM

From: Assistant Chief of Staff, Aircraft Material  
To: Department of Defense Inspector General Office (Attn:  
Tom Winters)

Encl: (1) NAWC Lakehurst procurement schedule, EDDs, and  
document numbers for C-130T support equipment of  
23 Mar 96

1. The following information is provided to assist in your final  
analysis of the C-130T support equipment (SE) posture for  
COMNAVAIRESFOR maintenance activities.

2. Enclosure (1) reflects active document numbers, estimated  
delivery dates (EDD) and quantities being procured by the Naval  
Inventory Control Point (NAVICP) for this TYCOM's C-130T SE  
program for both the organizational and intermediate levels of  
maintenance. These items are in addition to adequate quantities  
of both common and peculiar SE inventories that currently exist  
in the Naval Reserve for the C-130T aircraft and its supporting  
maintenance activities.

3. As COMNAVAIRESFOR possesses the only C-130T aircraft in the  
Navy, redistribution of C-130T peculiar SE from other Support  
Equipment Controlling Authorities (SECA) is not possible. Common  
SE deficits have never posed major C-130T supportability problems  
for this TYCOM.

4. During FY-95 alone, approximately \$1.4M was turned over to  
NAVICP from the Weapons System Manager at NAWC Lakehurst to  
obligate toward procuring additional C-130T SE for this SECA.

5. This SECA is satisfied with the current delivery schedule for  
any SE deficits that are pending delivery for the C-130T, which  
is why we did not submit a critical deficit list to the fact  
finding team. We made it as clear as possible that SE deficits  
for this aircraft and its supporting maintenance activities was  
not an issue for the TYCOM.

  
H. P. BRASELMAN

Attachment

## **Audit Team Members**

This report was prepared by the Acquisition Management Directorate,  
Office of the Assistant Inspector General for Auditing, DoD.

Patricia A. Brannin  
James L. Koloshey  
Thomas J. Winter  
Robin G. McCoy  
Lois A. Therrien  
Kathryn C. Franks  
Renee L. Gaskin  
Noble C. White  
Timothy A. Oliver  
Mary Ann Hourclé